TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 16, 2007

Ms. LaDonna Castañuela
Office of the Chief Clerk
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: American Waste Services Residuals Management, Inc.
TCEQ Permit Nos: WQ0004745000 and WQ0004746000
TCEQ Docket No. 2006-1946-SLG

Dear Ms. Castañuela:

Please find enclosed the original Executive Director's Response to Hearing Request and Response to Request for Reconsideration in the above referenced matter.

If you have any questions or comments, please contact me at (512) 239-5778. Thank you for your attention to this matter.

Sincerely,

Anthony Tatu, Staff Attorney
Environmental Law Division, MC 173

DOCKET NUMBER 2006-1946-SLG

APPLICATION BY AMERICAN	§	BEFORE THE
WASTEWATER SERVICES	§	TEXAS COMMISSION ON
RESIDUALS MANAGEMENT, INC.	§	ENVIRONMENTAL QUALITY
for TCEQ PERMIT NO. WQ 4745000	§	
and PERMIT NO. WQ 4746000	§	

EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS AND RESPONSE TO REQUEST FOR RECONSIDERATION

I. Introduction

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to the Hearing Requests filed by Hope Ging, and Tony Ray Buzan, and the Request for Reconsideration filed by Cullen Johnson.

Attached for Commission consideration are the following:

Attachment A-Draft Permits
Attachment B-Technical Summaries
Attachment C-Compliance History
Attachment D-Executive Director's Responses to Public Comments (RTC)
Attachment E-Applicant's Land Use Map and Landowners List.
Attachment F- TCEQ GIS map

Copies were also provided to all parties. The RTC was previously mailed by the Office of the Chief Clerk to all persons on the mailing list.

II. Description of the Facilities

American Water Services Residuals Management, Inc.(Applicant), has applied to the TCEQ for two new permits that would authorize the beneficial application of wastewater treatment plant sewage sludge and drinking water treatment plant sludge to agricultural land at two different sites. Proposed permit 4746-000 is on 285.41 acres of agricultural land with a site of approximately 361.93 acres (the "North" site). Proposed permit 4745-000 is on 232.62 acres of agricultural land with a site of approximately 409.52 acres ("South" site). The sites are near each other and separated by one tract of land. The proposed sites are located approximately one mile east of the City of Thrall and northeast of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063 in Williamson County, Texas.

III. Procedural Background

Both applications were received on July 7, 2004, and declared administratively complete on August 31, 2004. Notice of Receipt of Application and Intent to Obtain a Beneficial Land Use Permit (NORI) for both permits was published September 7, 2004 in the *Taylor Daily Press*. The Executive Director completed the technical review of the applications on May 27, 2005, and prepared the draft permits. Notice of Application and Preliminary Decision and Notice of Public Meeting for Beneficial Land Use Permits (NAPD) were published August 2, 2005 in the *Taylor Daily Press*. A public meeting was held on September 1, 2005 in Thrall, Texas, and the comment period closed at the conclusion of that public meeting. Over 500 comments were received on these applications. In response to concerns raised in the comments and during the public meeting, TCEQ staff scheduled an additional site visit on December 6, 2005. Additional buffer zones were added to the draft permits. A Response to Public Comment (RTC) for each site was filed with the Office of the Chief Clerk on October 2, 2006, and mailed to commentors on October 10, 2006. The applications were administratively complete on or after September 1, 1999; therefore, the applications are subject to the procedural requirements adopted pursuant to House Bill 801 (76th Legislature, 1999).

IV. The Evaluation Process of Hearing Requests

In order for the commission to consider a hearing request, the commission must first determine whether the request meets the requirements found in 30 TAC § 55.201.

A hearing request must substantially comply with the following:

(1) give the name, address, daytime telephone number, and, where possible, fax number of the person who files the request. If the request is made by a group or association, the request must identify one person by name, address, daytime telephone number, and, where possible, fax number, who shall be responsible for receiving all official communications and documents for the group;

(2) identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requestor's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public;

(3) request a contested case hearing;

(4) list all relevant and material disputed issues of fact that were raised during the public comment period and that are the basis of the hearing request. To facilitate the commission's determination of the number and scope of issues to be referred to hearing, the requestor should, to the extent possible, specify any of the executive

director's responses to comments that the requestor disputes and the factual basis of the dispute and list any disputed issues of law or policy; and

(5) provide any other information specified in the public notice of application.

30 TAC § 55.201(d)

In order to grant a hearing, the commission must next determine whether a requestor is an "affected person." An "affected person" is defined by 30 TAC § 55.203(a) as anyone who "has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. An interest common to members of the general public does not qualify as a personal justiciable interest." Governmental entities, including local governments and public agencies with authority under state law over issues raised by the application may be considered affected persons. 30 TAC § 55.203 (b).Texas Health and Safety Code § 361.121(c) states that an owner of land located within one-quarter mile of the proposed land application unit who lives on that land is an affected person. The commission must evaluate a number of factors when determining whether a person is affected. The factors that must be considered, include, but are not limited to, the following:

(1) whether the interest claimed is one protected by the law under which the application will be considered;
(2) distance restrictions or other limitations imposed by law on the affected interest;
(3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
(4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person;
(5) likely impact of the regulated activity on use of the impacted natural resource by the person; and
(6) for governmental entities, their statutory authority over or interest in the issues relevant to the application.

30 TAC § 55.203(c).

If the commission determines that the requestor has met the requirements for requesting a hearing, the commission may refer an issue to the State Office of Administrative Hearings (SOAH) if the issue:

(1) involves a disputed question of fact;
(2) was raised during the public comment period; and
(3) is relevant and material to the decision on the application.

30 TAC § 50.115(c). Under 30 TAC § 55.209, responses to hearing requests must specifically address:

(1) whether the requestor is an affected person;
(2) which issues raised in the hearing request are disputed;
(3) whether the dispute involves questions of fact or of law;
(4) whether the issues were raised during the public comment period;
(5) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment;
(6) whether the issues are relevant and material to the decision on the application; and
(7) a maximum expected duration for the contested case hearing.

V. Analysis Of The Requests

A. Hearing Requests

1. Whether the Requestors Complied with 30 TAC §§ 55.201 (c) and (d)

Hope Ging

The hearing request by Ms. Ging was timely, submitted in writing, included at least a mailing address, referenced the permit number, identified disputed issues of concern, and specifically requested a contested case hearing for both permits.

Tony Ray Buzan

The hearing request submitted by Mr. Buzan was timely, submitted in writing, included at least a mailing address, referenced both permit numbers and specifically requested a contested case hearing. However, Mr. Buzan did not identify issues of concern in his hearing request.

2. Whether the Requestor Meets The Requirements of an Affected Person

Hope Ging

Ms. Ging states that she lives in the middle of the two proposed sites. Ms. Ging's husband, Sidney Ging, is included as an adjacent landowner for the South Site and based on the Executive Director's GIS map, she lives approximately 1/3rd of a mile from the North Site.

Ms. Ging raises several issues in her hearing request, including: whether the land application of sludge at the two sites will negatively impact the health of the surrounding residents; whether the land application of sludge will negatively affect the property values of the surrounding homeowners; whether the land application of sludge at the two sites will negatively impact wildlife in the area; and whether the land application of sludge at the two sites will result in nuisance odors for the surrounding residents.

The Executive Director concludes that a reasonable relationship exists between the homeowner interests claimed by Ms. Ging and the regulated activity. (30 TAC § 55.204 (c) (3)).

Tony Ray Buzan

As previously discussed, Mr. Buzan does not discuss any issues of concern in his hearing request.

Based on the information contained in his hearing request, the Executive Director cannot conclude that a reasonable relationship exists between any interest claimed by Mr. Buzan and the regulated activity. However, Mr. Buzan previously submitted comments expressing his concern with the application. The Executive Director estimates that Mr. Buzan lives approximately 1/5 to 1/4 of a mile from the North site and 1/2 mile from the South site. Therefore, the Executive Director will consider any additional information submitted by Mr. Buzan explaining how he is an affected person in response to this filing.

3. Whether Issues Raised are Referable to SOAH for a Contested Case Hearing

In addition to recommending to the Commission those persons who qualify as affected persons, the Executive Director analyzes issues in accordance with the regulatory criteria. All of the issues discussed below were raised during the public comment period and addressed in the RTC. None were withdrawn.

(1) Whether the land application of sludge at the two sites will negatively impact the health of the surrounding residents.

Ms. Ging raises this issue in her hearing request. She is specifically concerned with her son's health and her parents health. Ms. Ging is concerned with respiratory infections and other non carcinogenic afflictions. This issue was raised during the comment period and is addressed in the Executive Director's RTCs in response No. 7. This issue is a factual one and is relevant and material to the Commission's decision on this application. The Executive Director concludes that the impact of land application of sludge on the health of surrounding residents is a referable issue.

(2) Whether the land application of sludge at the two sites will in nuisance odors for the surrounding residents.

Ms. Ging states that she will not be able to go outside or open her windows if these permits are issued. The Executive Director interprets these statements as concern with nuisance odors. This issue was also raised during the comment period and is addressed in the Executive Director's RTCs in response No. 15. This issue is relevant and material to the Commission's decision on this application. The Executive Director concludes that the impact of land application of sludge on the quality of life of surrounding residents is a referable issue.

(3) Whether the land application of sludge at the two sites will negatively impact wildlife or domestic livestock in the area.

This issue was raised by Mr. Ging in her hearing request. This issue was also raised during the comment period and is addressed in the Executive Director's RTCs in responses Nos. 16 and 18. This issue is a factual one and is relevant and material to the Commission's decision on this application. The Executive Director concludes that the issue of whether the land application of sludge at the two sites will negatively impact wildlife or domestic livestock in the area is a referable issue.

(4) Whether the land application of sludge will negatively affect the property values of the surrounding homeowners.

Ms. Ging raises this issue in her hearing request. The Executive Director responded to comments concerning property values in Response No. 13 in the RTCs prepared for both Permit WQ 4745-000 and WQ 4746-000. The TCEQ does not have jurisdiction over issues related to property values. Although this issues may be factual, it is not relevant or material to the Commission's decision on this application. The Executive Director concludes that property values is not a referable issue.

B. Request for Reconsideration

Cullen Johnson, on behalf of himself and his sister, Elizabeth Williamson, requested reconsideration of the Executive Director's decision for proposed permit No. 4745-000 (South site). Mr. Johnson states that he did not receive mailed notice of the application in violation of commission rules. Mr. Johnson also states that there is a functioning water well on his property which is located within a one mile radius of the application site.

Notice is mailed to adjacent landowners by the Office of the Chief Clerk, via regular U.S. mail, based on a listing of adjacent landowners provided by the Applicant. Notice is also mailed to a list of interested persons who have requested to be on a mailing list. As an owner of land adjacent to the South site, Mr. Johnson is on both lists in the Office of the Chief Clerks and should have received mailed notice. The Office of the Chief Clerk keeps all mail that is returned as undeliverable by the postal service. No mail to Mr. Johnson was returned. The Executive Director recognizes the possibility that the mailed notice to Mr. Johnson was misplaced by the postal service. However, Mr. Johnson did provide comments to the Executive Director during the comment period at the public meeting.

With regard to the well located on Mr. Johnson's property, this issue is discussed in the Executive Director's RTC's in response No. 21. TCEQ rules required a buffer zone of 150 feet from a private water supply well. Additionally, Mr. Johnson's property is up gradient and cross gradient from the proposed land application site.

The proposed permits comply with applicable regulations and no additional information was provided that would cause the Executive Director to alter his recommendation to issue the permits. Consequently, the Executive Director recommends denial of the Request for Reconsideration.

VI. Duration of the Contested Case Hearing

The Executive Director recommends a six month duration for a contested case hearing on this matter, should there be one, between preliminary hearing and the presentation of a proposal for decision.

VII. Executive Director's Recommendation

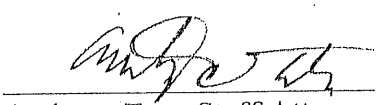
The Executive Director recommends the Commission find that Hope Ging is an affected person for both applications. The Executive Director further recommends that the Commission deny Mr. Buzan's hearing request unless he provides additional information explaining why he is an affected person. The Executive Director also recommends that the Commissioners deny the Request for Reconsideration filed by Cullen Johnson. Finally, the Executive Director recommends that the Commission find that the following are disputed issues of fact that were raised during the comment period and that are relevant and material to the commission's decision on the permit application:

1. Whether the land application of sludge at the two sites will negatively impact the health of the surrounding residents.

2. Whether the land application of sludge at the two sites will in nuisance odors for the surrounding residents.

3. Whether the land application of sludge at the two sites will negatively impact wildlife or domestic livestock in the area.

Robert Martinez, Director
Environmental Law Division



Anthony Tatu, Staff Attorney
Environmental Law Division

REPRESENTING THE EXECUTIVE
DIRECTOR OF THE TEXAS COMMISSION
ON ENVIRONMENTAL
QUALITY

CERTIFICATE OF SERVICE

I hereby certify that on this 16th of March, 2007, the Executive Director's Response to Hearing Request and Response to Request for Reconsideration was filed with the Chief Clerk of the Texas Commission on Environmental Quality, Austin Texas.

I further certify that on this day a true and correct copy of the Response to Hearing Request and Response to Request for Reconsideration was sent to the persons listed on the attached service list.

Anthony Tatu, Staff Attorney
Environmental Law Division, MC 173

MAILING LIST
AMERICAN WATER SERVICES RESIDUALS MANAGEMENT, INC.
DOCKET NO. 2006-1992-SLG; PERMIT NOS. WQ0004745000 AND WQ0004746000

FOR THE APPLICANT:
Paul B. Beydler
American Water Services Residuals Management Inc.
P.O. Box 73006
Houston, Texas 77273
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Fax: (713) 316-5080

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FOR ALTERNATIVE DISPUTE RESOLUTION:
Mr. Kyle Lucas
Texas Commission on Environmental Quality
Alternative Dispute Resolution, MC-222
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FOR THE CHIEF CLERK:
Ms. LaDonna Castañuela
Texas Commission on Environmental Quality
Office of Chief Clerk, MC-105
Austin, Texas 78711
Tel: (512) 239-3300
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REQUESTERS:
Tony Ray Buzan
1100 CR 430
Thrall, Texas 76578-8517

Hope Ging
800 CR 430
Thrall, Texas 76578-8516

MAILING LIST
AMERICAN WATER SERVICES RESIDUALS MANAGEMENT, INC.
DOCKET NO. 2006-1992-SLG; PERMIT NOS. WQ0004745000 AND WQ0004746000
CONTINUED

REQUESTERS:
Cullen Johnson
4020 Sable Oaks Drive
Round Rock, Texas 78664-6251

PUBLIC OFFICIAL-INTERESTED
PERSON:
The Honorable Mike Krusee
Texas House of Representatives
P.O. Box 2910
Austin, Texas 78768-2910

ATTACHMENT A

Draft Permits
WQ4745000
WQ4746000

PERMIT NO. WQ0004745000

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO LAND APPLY SEWAGE SLUDGE
under provisions of Chapter 26 of the Texas Water Code,
Chapter 361 of Health and Safety Code, Chapter 312 of Texas Administrative Code.

I. PERMITTEE:

American Water Services Residuals Management, Inc.
P.O. Box 73006

Houston, Texas 77273-3006

II. AUTHORIZATION:

Beneficial Land Application of Wastewater Treatment Plant (WWTP) sewage sludge and Water Treatment Plant (WTP) sludge.

III. GENERAL DESCRIPTION AND LOCATION OF SITE:

Description: The permittee is authorized to land apply WWTP sewage sludge and WTP sludge at an annual rate not to exceed 7.2 dry tons per acre per year on 232.62 acres located within approximately 409.52 acres at this site.

Location: The sewage sludge land application site is located approximately one mile east of the City of Thrall, and northeast of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063 in Williamson County, Texas (see Attachment A).

SIC Code: 0139

Drainage Basin: The land application site is located in the drainage area of Brushy Creek in Segment No. 1244 of the Brazos River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight five years from the date of issuance listed below.

ISSUED DATE:

_____
For the Commission

IV. GENERAL REQUIREMENTS:

A. The permittee shall handle and dispose of sewage sludge (including WTP sludge) in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

B. Application for renewing this permit shall be submitted by the permittee at least 180 days prior to expiration date of this permit.

C. WWTP and WTP sludge

1. In all cases, the generator or processor of sewage sludge shall provide necessary analytical information to the parties who receive the sludge, including those receiving the sewage sludge for land application, to assure compliance with these regulations.

2. Permittee shall not accept the sewage sludge that fails the Toxicity Characteristic Leaching Procedure (TCLP) test per the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table1 of 40 CFR Section 261.24.

3. Sewage sludge shall not be applied to the land if the concentration of any metal exceeds the ceiling concentration listed in Table 1 below. Additional information on the frequency of testing for metals is found in Section IX.

TABLE 1

Pollutant	Ceiling Concentration (milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

* Dry weight basis

4. When the total aggregate amount of any metal in Table 2 (in all sludge applied at the site during the entire use of this site) reaches the cumulative level listed in table 2 below, only sludge with metal levels at or below those shown Table 3 below can be applied at the site. To compute this criteria, the total amount of each metal in all sludge applied must be summed on a continuing basis as sludge is applied.

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

* Dry weight basis

5. Sludge also cannot be applied in excess of the most restrictive of the following criteria:

   a. The maximum sludge application rate (MSAR) based on crop nitrogen needs (also referred to as the agronomic rate), which is calculated based on the total amount of nitrogen in the sludge, septage and in the soils at the application site and on the nitrogen requirements of the vegetation in the application area.

   b. The MSAR for each metal pollutant in Table 1 above, which is calculated individually for each metal based on its concentration in the sludge and in the soils in the application area.

6. All of the MSARs above must be calculated using Appendix A of the "Application for Permit for Beneficial Land Use of Sewage Sludge." These calculations must cover both sludge and septage for areas where both are applied. If sludge is received from multiple sources, the average concentration of each of the elements above must be determined using "Table 2 - Volume Weighted Average (Mean) of Nutrient and Pollutant Concentration" from the application form.

7. Anytime the permittee plans to accept WWTP sludge from any source(s) other than those listed in the application and approved for this permit, the permittee must notify and receive authorization from the Water Quality Division, Land Application Team (MC 148) of the TCEQ prior to receiving the new sludge. The notification must include information to demonstrate the sludge from the proposed new source(s) meets the requirements of this permit. The permittee must provide certifications from each source that the sludge meets the requirement for a Process to Significantly Reduce Pathogens (PSRP) or other alternatives. The permittee must provide documentation that the sludge meets the limits for polychlorinated biphenyls (PCBs), vector attraction and the metal pollutants in Table 1 above. No sludge from sources other than the ones listed in the application can be land applied prior to receiving written authorization from the TCEQ.

D. The permittee shall maintain a commercial liability insurance policy for the duration of the permit that:

1. is issued by an insurance company authorized to do business in this state that has a rating by the A.M. Best Company of A- or better;

2. designates the commission as an additional insured; and

3. is in an amount of not less than $3 million.

E. The permittee shall maintain an environmental impairment insurance policy for the duration of the permit that:

1. is issued by an insurance company authorized to do business in this state that has a rating by the A.M. Best Company of A- or better;

2. designates the commission as an additional insured; and

3. is in an amount of not less than $3 million.

V. OPERATIONAL REQUIREMENTS:

The operation and maintenance of this land application site must be in accordance with 30 TAC Chapter 312 and Title 40 of the Code of Federal Regulations (40 CFR) Part 503 as they relate to land application for beneficial use. All applicable local and county ordinances must also be followed.

VI. REQUIRED MANAGEMENT PRACTICES:

A. Sludge applications must not cause or contribute to the harm of a threatened or endangered species of plant, fish, or wildlife or result in the destruction or adverse modification of the critical habitat of a threatened or endangered species.

B. Sludge must not be applied to land that is flooded, frozen or snow-covered to prevent entry of bulk sewage sludge into wetland or other waters in the State.

C. Sludge shall be land applied in a manner which complies with Management Requirements in accordance with 30 TAC Section 312.44 including maintaining the following buffer zones for each application area:

a.	Established school, institution, business or residence	750 feet
b.	Public water supply well, intake, public water supply spring or similar source, public water treatment plant, or public water supply elevated or ground storage tank	500 feet
c.	Solution channels, sinkholes, or other conduits to groundwater	200 feet
d.	Waters in the State of Texas - when sludge is not incorporated	200 feet

e.	Waters in the State of Texas - when sludge is incorporated within 48 hours of application and a vegetated cover is established	33 feet
f.	Private water supply well	150 feet
g.	Public right of way	50 feet
h.	Property boundary	50 feet
i.	Irrigation conveyance canals	10 feet

D. Sludge must be applied to the land at an annual application rate that is equal to or less than the agronomic rate for the vegetation in the area on which the sludge is applied.

E. The seasonally high water table, groundwater table, or depth to water-saturated soils must be at least three (3) feet below the treatment zone for soils with moderate to slow permeability (less than two inches per hour) or four (4) feet below the treatment zone for soils with rapid to moderately rapid permeability (between two and twenty inches per hour). Sludge can not be applied to soils with permeation rates greater than twenty inches per hour.

F. Sludge must be applied by a method and under conditions that prevent runoff beyond the active application area and that protect the quality of the surface water and the soils in the unsaturated zone. In addition the following conditions must be met:

1. Sludge must be applied uniformly over the surface of the land.

2. Sludge must not be applied to areas where permeable surface soils are less than 2 feet thick.

3. Sludge must not be applied during rainstorms or during periods in which surface soils are water-saturated.

4. Sludge must not be applied to any areas having a slope in excess of 8%.

5. Where runoff from the active application area is evident, the operator must cease further sludge application until the condition is corrected.

6. The site operator must prevent public health nuisances. Sludge debris must be prevented from leaving the site. Where nuisance conditions exist, the operator must eliminate the nuisance as soon as possible.

7. Sludge application practices must not allow uncontrolled public access, so as to protect the public from potential health and safety hazards at the site.

8. Sewage sludge can be applied only to the land application area shown on Attachment B. The buffer zones as listed on that map as well as the buffer zone distances listed in section VI.C. must not have any sludge applied on them.

G. The permittee shall post a sign that is visible from a road or sidewalk that is adjacent to the premises on which the land application unit is located stating that a beneficial land use application site is located on the premises.

VII. PATHOGEN CONTROL:

A. All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

1. Six alternatives are available to demonstrate compliance with Class A sewage sludge.

The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC §312.82(a)(2)(A) for specific information.

Alternative 2 The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 Processes to Further Reduce Pathogens (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

2. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must provide a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

B. In addition, the following site restrictions must be met if Class B sludge is land applied:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

5. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

6. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

7. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

9. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC §312.44.

VIII. VECTOR ATTRACTION REDUCTION REQUIREMENTS:

A. All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives for Vector Attraction Reduction.

Alternative 1 The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent [30 TAC §312.83(b)(1)].

Alternative 2 If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance [30 TAC §312.83(b)(2)].

Alternative 3 If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance [30 TAC §312.83(b)(3)].

Alternative 4 The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius. This test may only be run on sludge with a total percent solids of 2.0% or less [30 TAC §312.83(b)(4)].

Alternative 5 Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius [30 TAC §312.83(b)(5)].

Alternative 6 The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container [30 TAC §312.83(b)(6)].

Alternative 7 The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(7)].

Alternative 8 The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(8)].

Alternative 9 Sewage sludge shall be injected below the surface of the land. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(9)].

Alternative 10 Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(10)].

IX. MONITORING REQUIREMENTS:

The sewage sludge must be monitored according to 30 TAC §312.46(a)(1) for the ten metals in Table 1 of Section IV.C.3, pathogen reduction, and vector attraction reduction.

A. If the concentration of nitrogen or any of the metals in Table 1 in Section IV.C.3 exceeds the concentration used to calculate any of the MSARs in Sections IV.C.5 and IV.C.6, the MSAR for that element must be recalculated. If the sludge comes from multiple sources, the calculations must use Table 2 in Section IV.C.4 to provide a volume weighted average of all sludge that will be applied during the current monitoring period.

B. After the sludge has been monitored according to 30 TAC §312.46(a)(1) for a period of two years, an application may be submitted to amend this permit to reduce the frequency of monitoring.

C. The frequency of monitoring will be increased if recalculation of the agronomic rate increases the amount of sludge that can be applied to a higher threshold, as shown in 30 TAC §312.46(a)(1). The frequency of monitoring may also be increased if the TCEQ determines that the level of pollutants or pathogens in the sludge warrants such action.

D. If WWTP and WTP sludge is received at this site for land application then the permitee must ensure that the test data for TCLP and PCBs is provided from the generators.

E. All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency pursuant to 30 TAC §312.46(a)(1).

F. Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC §312.7.

X. RECORD KEEPING REQUIREMENTS:

The permittee shall fulfill record keeping requirements per 30 TAC §312.47. The documents shall be retained at the site and/or shall be readily available for review by a TCEQ representative.

A. Records of the following general information must be kept for all types of sludge and domestic septage land application permits:

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC §312.47(a)(4)(A)(ii) or 30 TAC §312.47(a)(5)(A)(ii), which ever is applicable.

2. The location, by street address, and specific latitude and longitude, of each site on which sewage sludge (including WTP sludge and/or domestic septage if applicable) is applied.

3. The number of acres in each site on which bulk sludge is applied.

4. The dates, times and quantities of sludge (and/or domestic septage if applicable) is applied to each site.

5. The cumulative amount of each pollutant in pounds per acre listed in Table 2 of Section IV.C.4 applied to each site.

6. The total amount of sludge applied to each site in dry tons.

7. A description of how the management practices listed above in Section IV.C., and 30 TAC §312.44 are being met. If these requirements are being met, prepare and keep a certification statement per 30 TAC §312.47(5)(B)(viii).

B. For Sewage Sludge with metal concentrations at or below levels in Table 3 of Section IV.C.4; which also meets Class A pathogen requirements in 30 TAC §312.82(a), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how the vector attraction reduction requirements are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

C. For Sewage Sludge with metal concentrations at or below levels in Table 3 of Section IV.C.4; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).

2. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

D. For Sewage Sludge with metal concentrations at or below levels in Table 1 of Section IV.C.3; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how the requirements to obtain information from the generators of sludge in 30 TAC §312.42(e) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(vi).

2. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).

3. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

XI. REPORTING REQUIREMENTS:

A. Permittee shall submit a separate annual report by September 30th of each year per 30 TAC §312.48 for each site. The annual report must include all the information required under 30 TAC §312.48 (including the items listed below) for a period covering September 1 of previous year through August 31 of current year. Additionally an "Annual Sludge Summary Report Form" (**Attachment C**) should be filled out and submitted with the annual report. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 11). Record retention requirements must be followed in accordance with 30 TAC §312.47.

1. Annual Sludge Summary Sheet (a blank form is provided in Attachment C of this permit) with following information. <u>This information must be submitted by all permittees</u>:

i. Permit number.

ii. The site location (address or latitude and longitude).

iii. Operator address, contact person name, telephone number, and fax number.

iv. Amount of sludge disposal dry weight (lbs/acre) at each disposal site. Report domestic septage quantities in gallons.

v. Number of acres on which sludge and septage is land applied.

vi. Vegetation grown and number of cuttings.

vii. Other items listed in the summary sheet.

2. If the sludge concentration for any metal listed in Table 3 of Section IV.C.4 is exceeded, the report must include the following information:

i. Date and time of each sludge application.

ii. All four certification statements required under 30 TAC §312.47(a)(5)(B).

iii. A description of how the information from the sludge generator was obtained, as per 30 TAC §312.42(e).

iv. A description of how each of the management practices in 30 TAC §312.44 were met for this site.

v. A description of how the site restrictions in 30 TAC §312.82(b)(3) were met for the site.

vi. If the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met, a description of how this was done.

vii. Soil and sludge test reports, as required in Section XII of this permit.

viii. Calculations of the current agronomic sludge application rate and the life of the site based on metal loadings (Appendix A of application, as identified in Section IV.C.4, or similar form).

3. If none of the concentrations for the metals exceed the values listed in Table 3 in Section IV.C.4 of this permit:

i. Information per 30 TAC §312.47(a)(3)(B) for Class A sludge.

ii. Information per 30 TAC §312.47(a)(4)(B) for Class B Sludge.

4. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2 in Section IV.C.4 of this permit the permittee shall provide the following additional information:

i. Date and time of each sludge application.

ii. The information in 30 TAC §312.47(a)(5)(A) must be obtained from the sludge generator and included in the report.

iii. The cumulative amount in pounds per acre of each pollutant listed in Table 2 in Section IV.C.4 applied to each application field of this site through bulk sewage sludge.

5. Permittee shall submit evidence that the permit holder is complying with the nutrient management plan developed by a **certified nutrient management specialist** in accordance with the practice standards of the Natural Resources Conservation Service of the United States Department of Agriculture.

B. Permittee shall submit a quarterly report by the 15th day of the month following each quarter during the reporting period (ie. quarterly reports will be due December 15th, March 15th, June 15th, and September 15th). Additionally, a "Quarterly Sludge Summary Report Form" (**Attachment D**) should be filled out and submitted with the quarterly report. The quarterly report must include all the information listed below. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 11). Record retention requirements must be followed in accordance with 30 TAC §312.47.

1. The source, quality, and quantity of sludge applied to the land application unit.

2. The location of the land application unit, either in terms of longitude and latitude or by physical address, including the county.

3. The dates of delivery of Class B sludge.

4. The dates of application of Class B sludge.

5. The cumulative amount of metals applied to the land application unit through the application of Class B sludge.

6. Crops grown at the land application unit site.

7. The suggested agronomic application rate for the Class B sludge.

XII. SOIL SAMPLING:

The permittee is required to notify the local TCEQ Regional Office 48 hours prior to taking annual soil samples at the permitted site.

The permittee must monitor the soil-sludge mixture for the site as follows using soil sampling requirements described in 30 TAC §312.11(d)(2) and (3):

	PARAMETER	NOTE	FREQUENCY	SAMPLE DEPTH	
				0"-6"	6"-24"
1	Nitrate Nitrogen (NO_3-N)		1 per year	X	X
2	Ammonia Nitrogen (NH_4-N)		1 per year	X	X
3	Total Nitrogen (TKN)	1	1 per year	X	X
4	Phosphorus (extractable)	2	1 per year	X	X

5	Potassium (extractable)		1 per year	X	X
6	Sodium (extractable)		1 per year	X	X
7	Magnesium (extractable)		1 per year	X	X
8	Calcium (extractable)		1 per year	X	X
9	Soluble Salts/EC	3	1 per year	X	X
10	Soil Water pH (S.U.)	4	1 per year	X	X
11	Total Arsenic (mg/kg)	*	1 per 5 years	X	NA
12	Total Cadmium (mg/kg)	*	1 per 5 years	X	NA
13	Total Chromium (mg/kg)	*	1 per 5 years	X	NA
14	Total Copper (mg/kg)	*	1 per 5 years	X	NA
15	Total Lead (mg/kg)	*	1 per 5 years	X	NA
16	Total Mercury (mg/kg)	*	1 per 5 years	X	NA
17	Total Molybdenum (mg/kg)	*	1 per 5 years	X	NA
18	Total Nickel (mg/kg)	*	1 per 5 years	X	NA
19	Total Selenium (mg/kg)	*	1 per 5 years	X	NA
20	Total Zinc (mg/kg)	*	1 per 5 years	X	NA

1. Determined by Kjeldahl digestion or an equivalent accepted procedure. Methods that rely on Mercury as a catalyst are not acceptable.
2. Mehlich III extraction.
3. Electrical Conductivity (EC) - determine from extract of 2:1 (volume/volume) water/soil mixture.
4. Soil pH must be analyzed by the electrometric method in "Test Methods for Evaluating Solid Waste," EPA SW-846, 40 CFR 260.11; method 9040.

* Analysis for metals in sludge and soil must be performed according to methods outlined in "Test Methods for Evaluating Solid Waste," EPA SW-846; method 3050.

XIII. STANDARD PROVISIONS:

A. This permit is granted in accordance with the Texas Water Code, Health and Safety Code, and the rules and other Orders of the Commission and the laws of the State of Texas.

B. Unless specified otherwise, any noncompliance which may endanger human health or safety, or the environment shall be reported to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided to the TCEQ Regional Office (MC Region 11) and to the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

C. Any noncompliance other than that specified in the Standard Provision B, or any required information not submitted or submitted incorrectly, shall be reported to the TCEQ Enforcement Division (MC 224) as promptly as possible.

D. Acceptance of this permit constitutes an acknowledgment and agreement that the permittee will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this permit and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this permit.

E. Prior to any transfer of this permit, Commission approval must be obtained. The Commission must be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Water Quality Applications Team (MC 161) of the Registration, Review, and Reporting Division.

F. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

G. The permittee is subject to the provisions of 30 TAC §305.125.

H. The permittee shall remit to the Commission annual fees per 30 TAC §312.9. Failure to pay the fees on time may result in revocation of this permit.

I. This permit does not become a vested right in the permit holder.

J. The permittee may not accept Class B sludge unless the sludge has been transported to the land application unit in a covered container with the covering firmly secured at the front and back.

XIV. SPECIAL PROVISIONS:

A. Maximum annual sludge application rate shall not exceed 7.2 dry tons/acre/year and shall be land applied at a frequency proposed in the application. Agronomic loading rates shall be calculated on an annual basis to ensure that nutrient balances are not exceeded.

B. The permittee should consider nutrient management practices appropriate for land application of sewage sludge and assess the potential risk for nitrogen and phosphorous to contribute to water quality impairment. Information and assistance to develop and implement a nutrient management plan are available from certified Nutrient Management Specialists, the Natural Resource Conservation Service (NRCS) Code 590 Practice Standard, and the Phosphorous Index. Annual analysis for extractable phosphorous in soil samples should be conducted using Mehlich III extraction. **Attachment E** lists sources for obtaining more information on Certified Nutrition Management Specialists, the NRCS 590 Standard, and the Phosphorous Index.

C. The temporary storage of sewage sludge is authorized at this site as indicated in Attachment B. Temporary storage shall follow the conditions stated in 30 TAC §312.50.

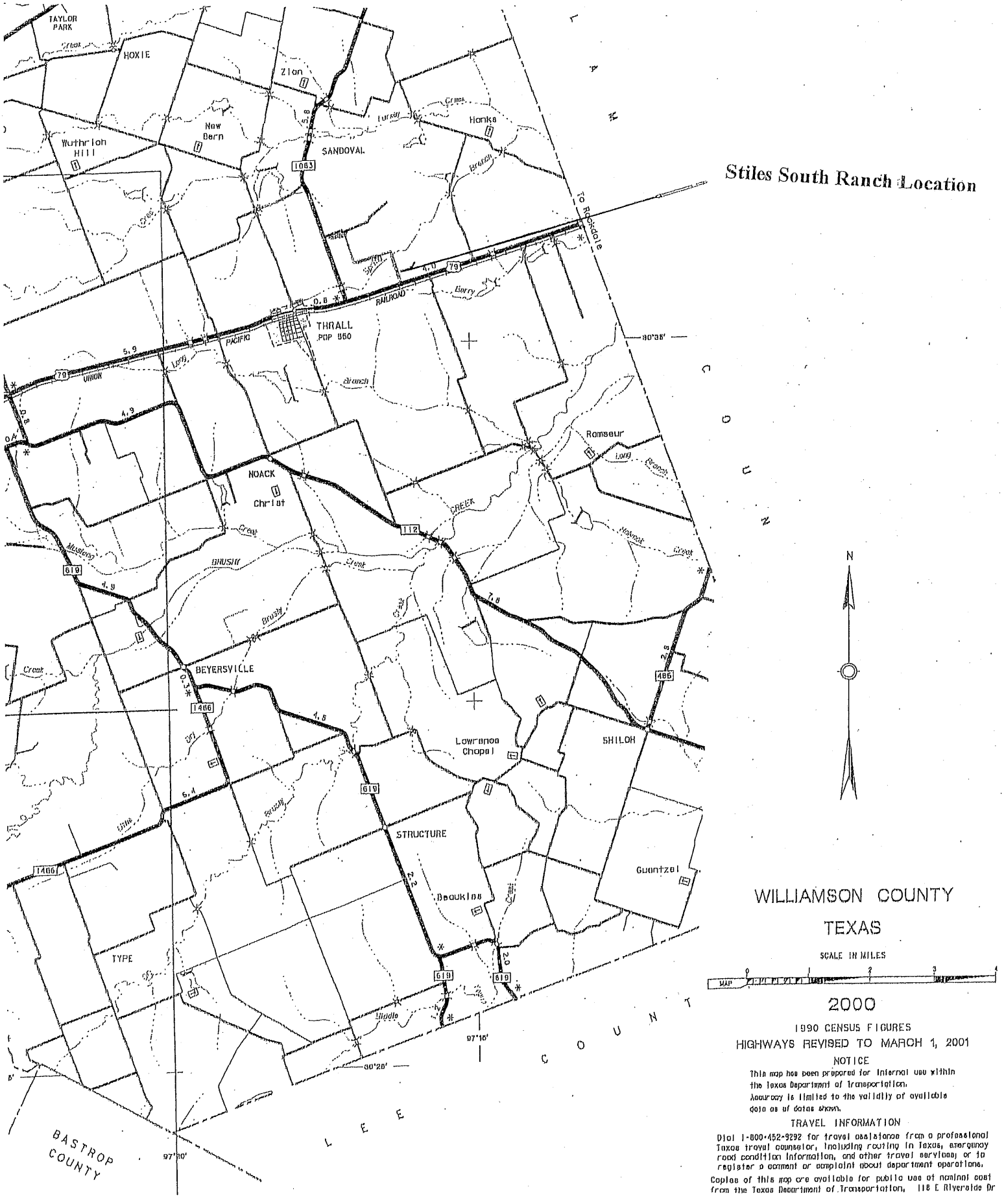
D. Prior to land application of sewage sludge, the permittee shall install two (2) monitoring wells that will sample the shallow groundwater occurring between the surface and 35 feet below ground level. The monitoring wells will have a water tight seal that will prevent surface water from entering the well bore and will conform to the engineering criteria outlined in 16 Texas Administrative Code 76 Water Well Drillers Rules.

The surface water quality of Spring Branch shall be sampled at a point before the branch leaves the permitted property. The locations of the 2 monitor wells and the sampling point on Spring Branch, before the branch leaves the permitted property, are cited on Attachment B.

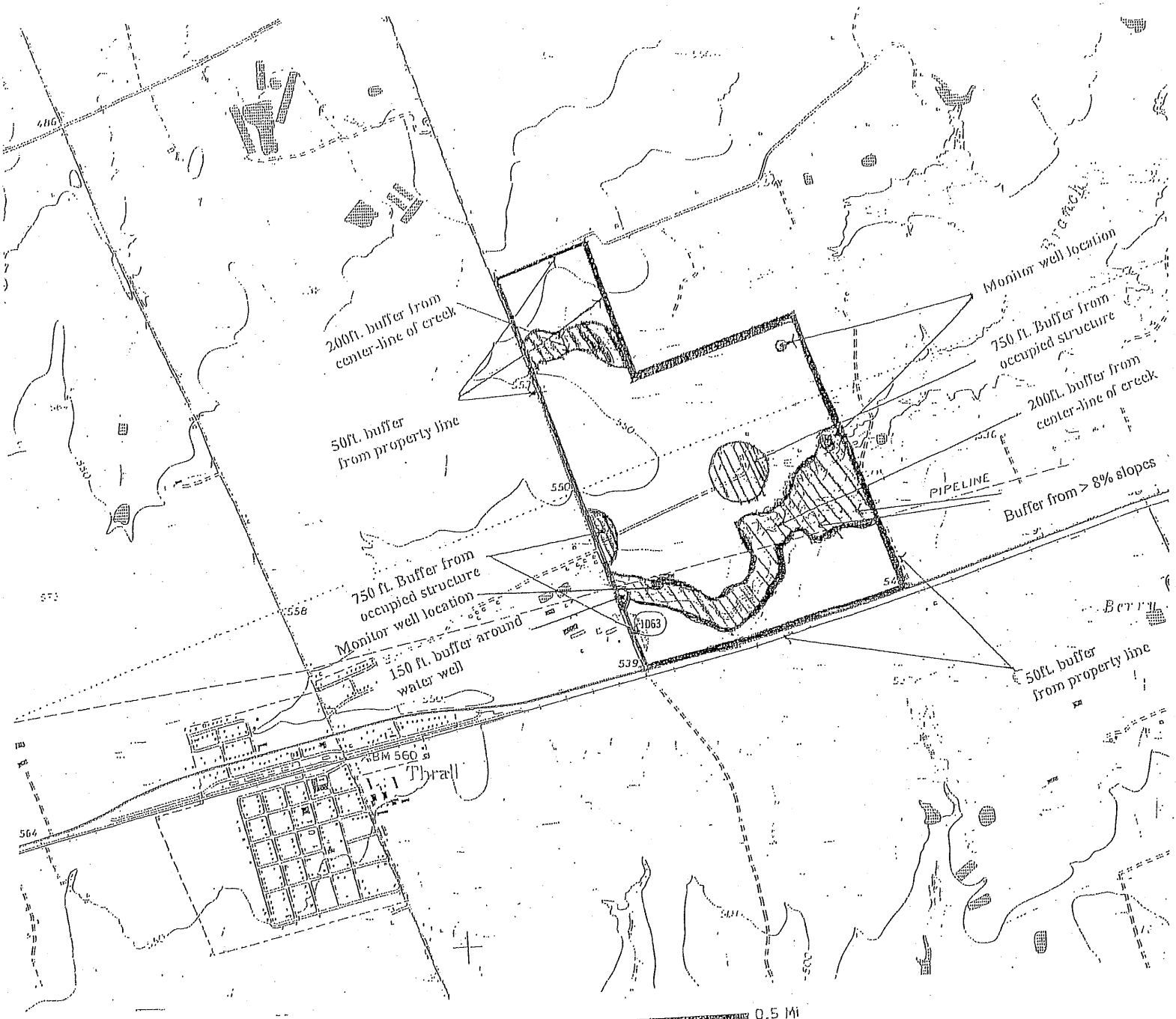
The groundwater from these two monitoring wells, and the surface water from Spring Branch shall be analyzed for Total Kjeldahl Nitrogen (TKN) as Total Nitrogen, Ammonia as Nitrogen, Nitrate as Nitrogen, Total Dissolved Solids (TDS), Chlorides, and fecal coliform.

Sampling shall occur on a semi-annual schedule during March and September of each year. The water quality results shall be submitted to the TCEQ Compliance Monitoring Section (MC 224) and the Water Quality Assessment Team (MC 150) within 60 days from the semi-annual sampling date. A copy of the water quality results shall also be retained onsite for inspection.

Attachment A



Attachment B



Application Area = 232.62 acres

Site Area = 409.52 acres

ROAD CLASSIFICATION

Heavy-Duty

Medium-Duty

Light-Duty

Unimproved Dirt

U.S. Route

State Rou

TEXAS

GEOGRAPHIC LOCATION

THRALL

TCEQ Attachment C

Annual Sludge Summary Report Form

Note 1: If your site has more than one land application field, please submit a separate form for each field.
Note 2: Please note, in addition to the summary form, you need to submit all information as required by 30 TAC 312.48.
Note 3. If you operate other registered/permitted sludge land application sites, a form should be submitted for each site.
Note 4: Also send one complete copy of your report and this form to the TCEQ regional office in your area.

For TCEQ Fiscal year _____; Reporting period from September 1,_____, August 31, _____

PERMIT NO.: _____ **DATE:** _____
NAME OF PERMITTEE: _____
MAILING ADDRESS: _____
_____
CONTACT PERSON: Name: _____ Telephone No: _____

Field No(if any): _____ (Please submit a separate form for each field).

1. Sewage Sludge :
   a.. Land Applied :_____dry tons/year
   b.. Disposed Via Monofill :_____dry tons/year
   c.. Disposed Via MSW Landfill :_____dry tons/year
2. Treated Domestic Septage - Land Applied :_____gallons/year
   a.. Method used to treat Domestic Septage:_____
3. Water Treatment Plant Sludge:
   a.. Land Applied:_____dry tons/year;
   b.. Dedicated Land Disposal:_____dry tons/year
   c.. Disposed Via monofill :_____ dry tons/year

Class A sludge land applied : _____ dry tons / year
Acreage used for Sludge Application/disposal at this site:_____acres
Site Vegetation (such as grass type etc) and # of cuttings: _____

Sewage Sludge only – Please provide information regarding the following 3 items:-

1. Does any of the sludge you have generated or received NOT MEET the concentration limits for the metals listed in Table 3 of "30 TAC §312.43 (b)? Yes _____ No_____
2. Has your field/site reached or exceeded 90% of the cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"? Yes _____ No _____
3. Has sewage sludge been applied to the field/site after 90% of cumulative metal loading rates for any of the metals per Table 2 of " 30 TAC §312.43 (b)" been reached? Yes _____No _____

PLEASE MAIL THE COMPLETED ANNUAL REPORT TO :
Texas Commission on Environmental Quality
Land Application Team (M/C 148)
Wastewater Permitting Section
P.O. Box 13087
Austin, TX 78711-3087

Rev G - 02/05/04-ust

TCEQ Attachment D

Quarterly Sludge Summary Report Form

Note 1: If your site has more than one land application field, please submit a separate form for each field.
Note 2: Please place this sheet at the top of your Quarterly Sludge Report.
Note 3. If you have more than one permitted site, then fill-out this form for each one of those sites.
Note 4. Please send a copy of this sheet and all attachments to the local TCEQ regional office.

For TCEQ Quarter _____ Reporting period from _____, to, _____

PERMIT NO.: _____ DATE: _____

NAME OF PERMITTEE: _____

MAILING ADDRESS: _____

_____

CONTACT PERSON: Name: _____ Telephone No: _____

Field No: _____ **(Submit separate form for each field, if site has two or more fields)**

- Class B Sewage Sludge Land Applied : _____ dry tons / quarter
- Treated Domestic Septage - Land Applied : _____ gallons / quarter
  - Method used to treat Domestic Septage: _____
- Water Treatment Plant Sludge - Land Applied: _____ dry tons /quarter
- Class A sludge land applied : _____ dry tons / quarter

a. Acreage used for Sludge Application/disposal at this site:- _____acres
b. Site Vegetation (such as grass type etc) and # of cuttings:- _____
c. Does any of the sludge you have generated or received DOES NOT MEET concentration limits for any of the metals listed in Table 3 of "30 TAC §312.43 (b)? Yes _____ No_____
d. Site location: Latitude:_____, Longitude: _____
e. Site physical address: _____

_____

Please attach the information regarding the following items (Sewage Sludge only):-

* Please note the following information shall be provided in computer generated report format:
* Please place check mark before each item below to indicate you have attached that item with this report.

_____ 1. Metal concentration, pathogen analysis data and vector attraction certifications of sludge for each source.
_____ 2. Provide a list containing the name and permit number of each source of sludge.
_____ 3. Date of delivery of each load of sludge land applied.
_____ 4. Date of land application of each load of sludge.
_____ 5. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"?
_____ 6. The suggested agronomic rate for the class B sludge.

PLEASE MAIL THE COMPLETED REPORT TO :

Texas Commission on Environmental Quality
Land Application Team (M/C 148)
Wastewater Permitting Section
P.O. Box 13087
Austin, TX 78711-3087

Rev B - 02/05/04-ust

TCEQ Attachment E

Information Sources on Phosphorous Risk Management

- **Certified Nutrient Management Specialists:**

  - "http://soilcrop.tamu.edu/events/index.html".

- **Natural Resource Conservation Service (NRCS) Code 590 Practice Standard:**
  This standard addresses the kind, source, placement, form, amount, timing, and application method of nutrients and soil amendments.

  - "http://www.tx.nrcs.usda.gov/eng/ TexasStandards/Final/ 590tx.pdf".

- **Phosphorous Index:** *This is a simple screening tool to rank vulnerability of fields as sources of phosphorous loss to surface runoff.*

  - "http://www.tx.nrcs.usda.gov/eng/ TexasStandards/Final/ TxTechnote15.pdf".

Note: The website addresses could change from time to time. So, please check for the latest addresses for these sites.

PERMIT NO. WQ0004746000

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO LAND APPLY SEWAGE SLUDGE
under provisions of Chapter 26 of the Texas Water Code,
Chapter 361 of Health and Safety Code, Chapter 312 of Texas Administrative Code.

I. PERMITTEE:

American Water Services Residuals Management, Inc.
P.O. Box 73006
Houston, Texas 77273-3006

II. AUTHORIZATION:

Beneficial Land Application of Wastewater Treatment Plant (WWTP) sewage sludge and Water Treatment Plant (WTP) sludge.

III. GENERAL DESCRIPTION AND LOCATION OF SITE:

Description: The permittee is authorized to land apply WWTP sewage sludge and WTP sludge at an annual rate not to exceed 7.4 dry tons per acre per year on 285.41 acres located within approximately 361.93 acres at this site.

Location: The sewage sludge land application site is located approximately two miles northeast of Thrall, 1.5 miles north of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063, 1/2 mile east of the intersection of County Road 430 and Farm-to-Market Road 1063 in Williamson County, Texas (see Attachment A).

SIC Code: 0139

Drainage Basin: The land application site is located in the drainage area of Brushy Creek in Segment No. 1244 of the Brazos River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight five years from the date of issuance listed below.

ISSUED DATE:

For the Commission

IV. GENERAL REQUIREMENTS:

A. The permittee shall handle and dispose of sewage sludge including WTP sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

B. Application for renewing this permit shall be submitted by the permittee at least 180 days prior to expiration date of this permit.

C. WWTP and WTP sludge

1. In all cases, the generator or processor of sewage sludge shall provide necessary analytical information to the parties who receive the sludge, including those receiving the sewage sludge for land application, to assure compliance with these regulations.

2. Permittee shall not accept the sewage sludge that fails the Toxicity Characteristic Leaching Procedure (TCLP) test per the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table1 of 40 CFR Section 261.24.

3. Sewage sludge shall not be applied to the land if the concentration of any metal exceeds the ceiling concentration listed in Table 1 below. Additional information on the frequency of testing for metals is found in Section IX.

TABLE 1

Pollutant	Ceiling Concentration (milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

* Dry weight basis

4. When the total aggregate amount of any metal in Table 2 (in all sludge applied at the site during the entire use of this site) reaches the cumulative level listed in table 2 below, only sludge with metal levels at or below those shown Table 3 below can be applied at the site. To compute this criteria, the total amount of each metal in all sludge applied must be summed on a continuing basis as sludge is applied.

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

* Dry weight basis

5. Sludge also cannot be applied in excess of the most restrictive of the following criteria:

   a. The maximum sludge application rate (MSAR) based on crop nitrogen needs (also referred to as the agronomic rate), which is calculated based on the total amount of nitrogen in the sludge, septage and in the soils at the application site and on the nitrogen requirements of the vegetation in the application area.

   b. The MSAR for each metal pollutant in Table 1 above, which is calculated individually for each metal based on its concentration in the sludge and in the soils in the application area.

6. All of the MSARs above must be calculated using Appendix A of the "Application for Permit for Beneficial Land Use of Sewage Sludge." These calculations must cover both sludge and septage for areas where both are applied. If sludge is received from multiple sources, the average concentration of each of the elements above must be determined using "Table 2 - Volume Weighted Average (Mean) of Nutrient and Pollutant Concentration" from the application form.

7. Anytime the permittee plans to accept WWTP sludge from any source(s) other than those listed in the application and approved for this permit, the permittee must notify and receive authorization from the Water Quality Division, Land Application Team (MC 148) of the TCEQ prior to receiving the new sludge. The notification must include information to demonstrate the sludge from the proposed new source(s) meets the requirements of this permit. The permittee must provide certifications from each source that the sludge meets the requirement for a Process to Significantly Reduce Pathogens (PSRP) or other alternatives. The permittee must provide documentation that the sludge meets the limits for polychlorinated biphenyls (PCBs), vector attraction and the metal pollutants in Table 1 above. No sludge from sources other than the ones listed in the application can be land applied prior to receiving written authorization from the TCEQ.

D. The permittee shall maintain a commercial liability insurance policy for the duration of the permit that:

1. is issued by an insurance company authorized to do business in this state that has a rating by the A.M. Best Company of A- or better;

2. designates the commission as an additional insured; and

3. is in an amount of not less than $3 million.

E. The permittee shall maintain an environmental impairment insurance policy for the duration of the permit that:

1. is issued by an insurance company authorized to do business in this state that has a rating by the A.M. Best Company of A- or better;

2. designates the commission as an additional insured; and

3. is in an amount of not less than $3 million.

V. OPERATIONAL REQUIREMENTS:

The operation and maintenance of this land application site must be in accordance with 30 TAC Chapter 312 and Title 40 of the Code of Federal Regulations (40 CFR) Part 503 as they relate to land application for beneficial use. All applicable local and county ordinances must also be followed.

VI. REQUIRED MANAGEMENT PRACTICES:

A. Sludge applications must not cause or contribute to the harm of a threatened or endangered species of plant, fish, or wildlife or result in the destruction or adverse modification of the critical habitat of a threatened or endangered species.

B. Sludge must not be applied to land that is flooded, frozen or snow-covered to prevent entry of bulk sewage sludge into wetland or other waters in the State.

C. Sludge shall be land applied in a manner which complies with Management Requirements in accordance with 30 TAC Section 312.44 including maintaining the following buffer zones for each application area:

a.	Established school, institution, business or residence	750 feet
b.	Public water supply well, intake, public water supply spring or similar source, public water treatment plant, or public water supply elevated or ground storage tank	500 feet
c.	Solution channels, sinkholes, or other conduits to groundwater	200 feet
d.	Waters in the State of Texas - when sludge is not incorporated	200 feet
e.	Waters in the State of Texas - when sludge is incorporated within 48 hours of application and a vegetated cover is established	33 feet
f.	Private water supply well	150 feet
g.	Public right of way	50 feet

h.	Property boundary	50 feet
i.	Irrigation conveyance canals	10 feet

D. Sludge must be applied to the land at an annual application rate that is equal to or less than the agronomic rate for the vegetation in the area on which the sludge is applied.

E. The seasonally high water table, groundwater table, or depth to water-saturated soils must be at least three (3) feet below the treatment zone for soils with moderate to slow permeability (less than two inches per hour) or four (4) feet below the treatment zone for soils with rapid to moderately rapid permeability (between two and twenty inches per hour). Sludge can not be applied to soils with permeation rates greater than twenty inches per hour.

F. Sludge must be applied by a method and under conditions that prevent runoff beyond the active application area and that protect the quality of the surface water and the soils in the unsaturated zone. In addition the following conditions must be met:

1. Sludge must be applied uniformly over the surface of the land.

2. Sludge must not be applied to areas where permeable surface soils are less than 2 feet thick.

3. Sludge must not be applied during rainstorms or during periods in which surface soils are water-saturated.

4. Sludge must not be applied to any areas having a slope in excess of 8%.

5. Where runoff from the active application area is evident, the operator must cease further sludge application until the condition is corrected.

6. The site operator must prevent public health nuisances. Sludge debris must be prevented from leaving the site. Where nuisance conditions exist, the operator must eliminate the nuisance as soon as possible.

7. Sludge application practices must not allow uncontrolled public access, so as to protect the public from potential health and safety hazards at the site.

8. Sewage sludge can be applied only to the land application area shown on Attachment B. The buffer zones as listed on that map as well as the buffer zone distances listed in section VI.C. must not have any sludge applied on them.

G. The permittee shall post a sign that is visible from a road or sidewalk that is adjacent to the premises on which the land application unit is located stating that a beneficial land use application site is located on the premises.

VII. PATHOGEN CONTROL:

A. All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

1. Six alternatives are available to demonstrate compliance with Class A sewage sludge.

The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC §312.82(a)(2)(A) for specific information.

Alternative 2 The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 Processes to Further Reduce Pathogens (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

2. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge..

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2

Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must provide a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

B. In addition, the following site restrictions must be met if Class B sludge is land applied:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

5. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

6. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

7. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

9. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC §312.44.

VIII. VECTOR ATTRACTION REDUCTION REQUIREMENTS:

A. All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives for Vector Attraction Reduction.

Alternative 1 The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent [30 TAC §312.83(b)(1)].

Alternative 2 If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance [30 TAC §312.83(b)(2)].

Alternative 3 If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance [30 TAC §312.83(b)(3)].

Alternative 4 The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius. This test may only be run on sludge with a total percent solids of 2.0% or less [30 TAC §312.83(b)(4)].

Alternative 5 Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius [30 TAC §312.83(b)(5)].

Alternative 6 The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container [30 TAC §312.83(b)(6)].

Alternative 7 The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(7)].

Alternative 8 The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(8)].

Alternative 9 Sewage sludge shall be injected below the surface of the land. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(9)].

Alternative 10 Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(10)].

IX. MONITORING REQUIREMENTS:

The sewage sludge must be monitored according to 30 TAC §312.46(a)(1) for the ten metals in Table 1 of Section IV.C.3, pathogen reduction, and vector attraction reduction.

A. If the concentration of nitrogen or any of the metals in Table 1 in Section IV.C.3 exceeds the concentration used to calculate any of the MSARs in Sections IV.C.5 and IV.C.6, the MSAR for that element must be recalculated. If the sludge comes from multiple sources, the calculations must use Table 2 in Section IV.C.4 to provide a volume weighted average of all sludge that will be applied during the current monitoring period.

B. After the sludge has been monitored according to 30 TAC §312.46(a)(1) for a period of two years, an application may be submitted to amend this permit to reduce the frequency of monitoring.

C. The frequency of monitoring will be increased if recalculation of the agronomic rate increases the amount of sludge that can be applied to a higher threshold, as shown in 30 TAC §312.46(a)(1). The frequency of monitoring may also be increased if the TCEQ determines that the level of pollutants or pathogens in the sludge warrants such action.

D. If WWTP and WTP sludge is received at this site for land application then the permitee must ensure that the test data for TCLP and PCBs is provided from the generators.

E. All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency pursuant to 30 TAC §312.46(a)(1).

F. Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC §312.7.

X. RECORD KEEPING REQUIREMENTS:

The permittee shall fulfill record keeping requirements per 30 TAC §312.47. The documents shall be retained at the site and/or shall be readily available for review by a TCEQ representative.

A. Records of the following general information must be kept for all types of sludge and domestic septage land application permits:

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC §312.47(a)(4)(A)(ii) or 30 TAC §312.47(a)(5)(A)(ii), which ever is applicable.

2. The location, by street address, and specific latitude and longitude, of each site on which sewage sludge (including WTP sludge and/or domestic septage if applicable) is applied.

3. The number of acres in each site on which bulk sludge is applied.

4. The dates, times and quantities of sludge (and/or domestic septage if applicable) is applied to each site.

5. The cumulative amount of each pollutant in pounds per acre listed in Table 2 of Section IV.C.4 applied to each site.

6. The total amount of sludge applied to each site in dry tons.

7. A description of how the management practices listed above in Section IV.C., and 30 TAC §312.44 are being met. If these requirements are being met, prepare and keep a certification statement per 30 TAC §312.47(5)(B)(viii).

B. For Sewage Sludge with metal concentrations at or below levels in Table 3 of Section IV.C.4; which also meets Class A pathogen requirements in 30 TAC §312.82(a), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how the vector attraction reduction requirements are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

C. For Sewage Sludge with metal concentrations at or below levels in Table 3 of Section IV.C.4; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).

2. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

D. For Sewage Sludge with metal concentrations at or below levels in Table 1 of Section IV.C.3; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):

1. A description of how the requirements to obtain information from the generators of sludge in 30 TAC §312.42(e) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(vi).

2. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).

3. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

XI. REPORTING REQUIREMENTS:

A. Permittee shall submit a separate annual report by September 30th of each year per 30 TAC §312.48 for each site. The annual report must include all the information required under 30 TAC §312.48 (including the items listed below) for a period covering September 1 of previous year through August 31 of current year. Additionally an "Annual Sludge Summary Report Form" (**Attachment C**) should be filled out and submitted with the annual report. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 11). Record retention requirements must be followed in accordance with 30 TAC §312.47.

1. Annual Sludge Summary Sheet (a blank form is provided in Attachment C of this permit) with following information. <u>This information must be submitted by all permittees</u>:

i. Permit number.

ii. The site location (address or latitude and longitude).

iii. Operator address, contact person name, telephone number, and fax number.

iv. Amount of sludge disposal dry weight (lbs/acre) at each disposal site. Report domestic septage quantities in gallons.

v. Number of acres on which sludge and septage is land applied.

vi. Vegetation grown and number of cuttings.

vii. Other items listed in the summary sheet.

2. If the sludge concentration for any metal listed in Table 3 of Section IV.C.4 is exceeded, the report must include the following information:

   i. Date and time of each sludge application.

   ii. All four certification statements required under 30 TAC §312.47(a)(5)(B).

   iii. A description of how the information from the sludge generator was obtained, as per 30 TAC §312.42(e).

   iv. A description of how each of the management practices in 30 TAC §312.44 were met for this site.

   v. A description of how the site restrictions in 30 TAC §312.82(b)(3) were met for the site.

   vi. If the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met, a description of how this was done.

   vii. Soil and sludge test reports, as required in Section XII of this permit.

   viii. Calculations of the current agronomic sludge application rate and the life of the site based on metal loadings (Appendix A of application, as identified in Section IV.C.4, or similar form).

3. If none of the concentrations for the metals exceed the values listed in Table 3 in Section IV.C.4 of this permit:

   i. Information per 30 TAC §312.47(a)(3)(B) for Class A sludge.

   ii. Information per 30 TAC §312.47(a)(4)(B) for Class B Sludge.

4. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2 in Section IV.C.4 of this permit the permittee shall provide the following additional information:

   i. Date and time of each sludge application.

   ii. The information in 30 TAC §312.47(a)(5)(A) must be obtained from the sludge generator and included in the report.

   iii. The cumulative amount in pounds per acre of each pollutant listed in Table 2 in Section IV.C.4 applied to each application field of this site through bulk sewage sludge.

5. Permittee shall submit evidence that the permit holder is complying with the nutrient management plan developed by a **certified nutrient management specialist** in accordance with the practice standards of the Natural Resources Conservation Service of the United States Department of Agriculture.

B. Permittee shall submit a quarterly report by the 15th day of the month following each quarter during the reporting period (ie. quarterly reports will be due December 15th, March 15th, June 15th, and September 15th). Additionally, a "Quarterly Sludge Summary Report Form" (**Attachment D**) should be filled out and submitted with the quarterly report. The quarterly report must include all the information listed below. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 11). Record retention requirements must be followed in accordance with 30 TAC §312.47.

1. The source, quality, and quantity of sludge applied to the land application unit.
2. The location of the land application unit, either in terms of longitude and latitude or by physical address, including the county.
3. The dates of delivery of Class B sludge.
4. The dates of application of Class B sludge.
5. The cumulative amount of metals applied to the land application unit through the application of Class B sludge.
6. Crops grown at the land application unit site.
7. The suggested agronomic application rate for the Class B sludge.

XII. SOIL SAMPLING:

The permittee is required to notify the local TCEQ Regional Office 48 hours prior to taking annual soil samples at the permitted site.

The permittee must monitor the soil-sludge mixture for the site as follows using soil sampling requirements described in 30 TAC §312.11(d)(2) and (3):

	PARAMETER	NOTE	FREQUENCY	SAMPLE DEPTH	
				0"-6"	6"-24"
1	Nitrate Nitrogen (NO_3-N)		1 per year	X	X
2	Ammonia Nitrogen (NH_4-N)		1 per year	X	X
3	Total Nitrogen (TKN)	1	1 per year	X	X
4	Phosphorus (extractable)	2	1 per year	X	X
5	Potassium (extractable)		1 per year	X	X
6	Sodium (extractable)		1 per year	X	X
7	Magnesium (extractable)		1 per year	X	X
8	Calcium (extractable)		1 per year	X	X
9	Soluble Salts/EC	3	1 per year	X	X
10	Soil Water pH (S.U.)	4	1 per year	X	X
11	Total Arsenic (mg/kg)	*	1 per 5 years	X	NA
12	Total Cadmium (mg/kg)	*	1 per 5 years	X	NA

13	Total Chromium (mg/kg)	*	1 per 5 years	X	NA
14	Total Copper (mg/kg)	*	1 per 5 years	X	NA
15	Total Lead (mg/kg)	*	1 per 5 years	X	NA
16	Total Mercury (mg/kg)	*	1 per 5 years	X	NA
17	Total Molybdenum (mg/kg)	*	1 per 5 years	X	NA
18	Total Nickel (mg/kg)	*	1 per 5 years	X	NA
19	Total Selenium (mg/kg)	*	1 per 5 years	X	NA
20	Total Zinc (mg/kg)	*	1 per 5 years	X	NA

1. Determined by Kjeldahl digestion or an equivalent accepted procedure. Methods that rely on Mercury as a catalyst are not acceptable.
2. Mehlich III extraction.
3. Electrical Conductivity (EC) - determine from extract of 2:1 (volume/volume) water/soil mixture.
4. Soil pH must be analyzed by the electrometric method in "Test Methods for Evaluating Solid Waste," EPA SW-846, 40 CFR 260.11; method 9040.

* Analysis for metals in sludge and soil must be performed according to methods outlined in "Test Methods for Evaluating Solid Waste," EPA SW-846; method 3050.

XIII. STANDARD PROVISIONS:

A. This permit is granted in accordance with the Texas Water Code, Health and Safety Code, and the rules and other Orders of the Commission and the laws of the State of Texas.

B. Unless specified otherwise, any noncompliance which may endanger human health or safety, or the environment shall be reported to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided to the TCEQ Regional Office (MC Region 11) and to the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

C. Any noncompliance other than that specified in the Standard Provision B, or any required information not submitted or submitted incorrectly, shall be reported to the TCEQ Enforcement Division (MC 224) as promptly as possible.

D. Acceptance of this permit constitutes an acknowledgment and agreement that the permittee will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this permit and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this permit.

E. Prior to any transfer of this permit, Commission approval must be obtained. The Commission must be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Water Quality Applications Team (MC 161) of the Registration, Review, and Reporting Division.

F. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

G. The permittee is subject to the provisions of 30 TAC §305.125.

H. The permittee shall remit to the Commission annual fees per 30 TAC §312.9. Failure to pay the fees on time may result in revocation of this permit.

I. This permit does not become a vested right in the permit holder.

J. The permittee may not accept Class B sludge unless the sludge has been transported to the land application unit in a covered container with the covering firmly secured at the front and back.

XIV. SPECIAL PROVISIONS:

A. Maximum annual sludge application rate shall not exceed 7.4 dry tons/acre/year and shall be land applied at a frequency proposed in the application. Agronomic loading rates shall be calculated on an annual basis to ensure that nutrient balances are not exceeded.

B. The permittee should consider nutrient management practices appropriate for land application of sewage sludge and assess the potential risk for nitrogen and phosphorous to contribute to water quality impairment. Information and assistance to develop and implement a nutrient management plan are available from certified Nutrient Management Specialists, the Natural Resource Conservation Service (NRCS) Code 590 Practice Standard, and the Phosphorous Index. Annual analysis for extractable phosphorous in soil samples should be conducted using Mehlich III extraction. **Attachment E** lists sources for obtaining more information on Certified Nutrition Management Specialists, the NRCS 590 Standard, and the Phosphorous Index.

C. The applicant shall install two (2) monitoring wells at the locations cited on **Attachment B** which is on the western side of the most easterly hill where Altoga Silty Clay Loam - ~~3% to 5% eroded (AgC2) soils~~ exhibited wetness along the fence line near a shallow cement collar. The monitoring wells will observe the development of seasonal shallow groundwater. Also, prior to application of sludge, the permittee shall sample the shallow groundwater in the two hand dug wells. The groundwater from these two monitoring wells shall be analyzed for Total Kjeldahl Nitrogen (TKN) as Total Nitrogen, Ammonia as Nitrogen, Nitrate as Nitrogen, Total Dissolved Solids (TDS), Chlorides, and fecal coliform.

Sampling shall occur on a semi-annual schedule during March and September of each year. The water quality results shall be submitted to the TCEQ Compliance and Monitoring Section (MC 224) and the Water Quality Assessment Team (MC 150) with 60 days from the semi-annual sampling date. A copy of the water quality results shall also be retained onsite for inspection. The hand dug wells shall also have a concrete lid to prevent water from entering the surface.

The applicant shall install one (1) up gradient soil monitoring device on the hill and one (1) soil monitoring device placed near the fence/gate leading to the broken collar hand dug well. The monitoring wells will be cemented from the surface to 1 foot below the ground level and have a 2 foot screen or micro pore perforations to allow shallow developed water to enter the well bore.

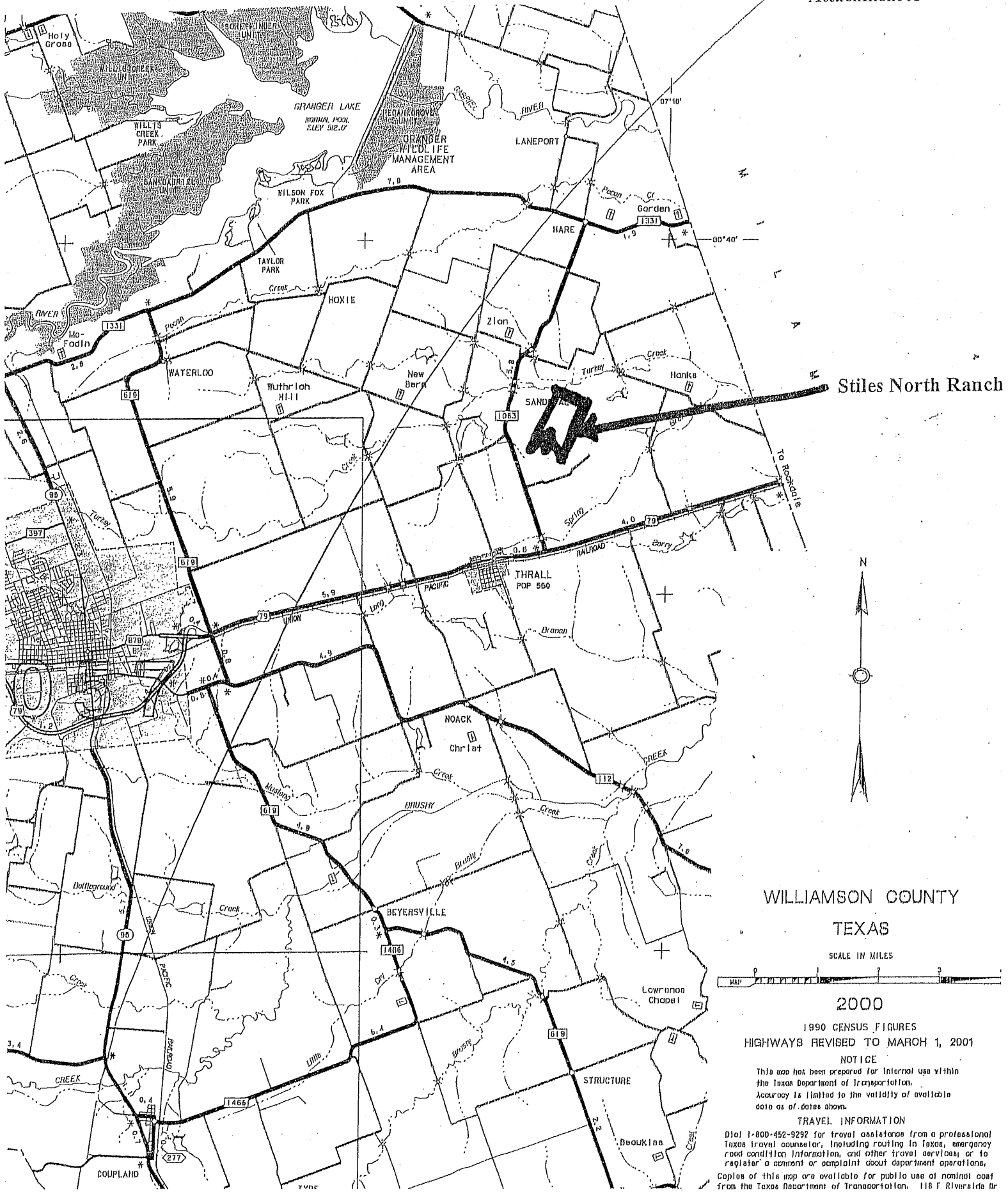
The monitoring wells shall be monitored before any sludge application from the hillside to the fence line. If water has accumulated in either of the monitoring wells, no sludge will be applied to the located hill down to the fence line buffer area. A log of these observations shall be kept the site operator and made available for field inspection by the TCEQ Region 11 Office.

D. The permittee shall not apply sludge to the gulley areas identified on Attachment B, until reconstructive terracing stabilizes the gully areas and cover vegetation is reestablished. The reconstructive effort shall be documented in a Reconstructive Terracing Management Plan that will be submitted for the approval to the Water Quality Assessment Team (MC 150) prior to land application of sludge to the gulley areas at this site.

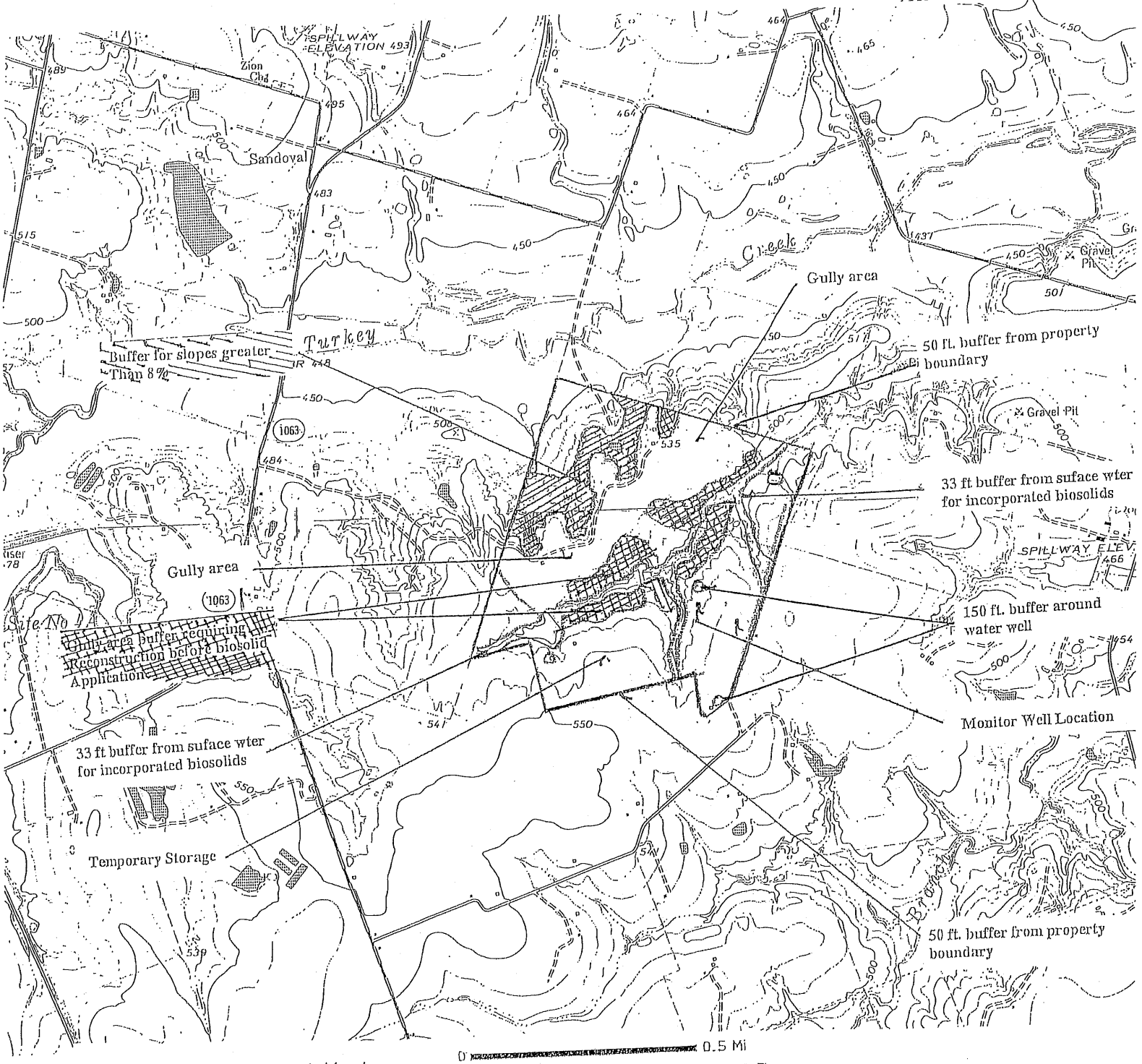
The plan shall describe the progress of the reconstructive terracing efforts and show the reconstructive area with established grasses and stabilized gully areas along with cover crops suitable for growth on the reconstructed slopes.

E. The temporary storage of sewage sludge is authorized at this site as indicated in Attachment B. Temporary storage shall follow the conditions stated in 30 TAC §312.50.

Attachment A



Attachment B



Application Area = 285.41 acres

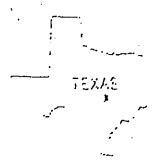
Site Area = 361.93 acres

ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———

Medium-duty ——— Unimproved dirt = = = = =

U.S. Route State Route



QUADRANGLE LOCATION

THRALL, TE

TCEQ

Attachment C

Annual Sludge Summary Report Form

Note 1: If your site has more than one land application field, please submit a separate form for each field.
Note 2: Please note, in addition to the summary form, you need to submit all information as required by 30 TAC 312.48.
Note 3. If you operate other registered/permitted sludge land application sites, a form should be submitted for each site.
Note 4: Also send one complete copy of your report and this form to the TCEQ regional office in your area.

For TCEQ Fiscal year _____; Reporting period from September 1,_____, August 31, _____

PERMIT NO.: _____ **DATE:** _____
NAME OF PERMITTEE: _____
MAILING ADDRESS: _____
_____
CONTACT PERSON: Name: _____ Telephone No: _____

Field No(if any): _____ (Please submit a separate form for each field).

1. Sewage Sludge :
   a.. Land Applied :_____dry tons/year
   b.. Disposed Via Monofill :_____dry tons/year
   c.. Disposed Via MSW Landfill :_____dry tons/year
2. Treated Domestic Septage - Land Applied :_____gallons/year
   a.. Method used to treat Domestic Septage:_____
3. Water Treatment Plant Sludge:
   a.. Land Applied:_____dry tons/year;
   b.. Dedicated Land Disposal:_____dry tons/year
   c.. Disposed Via monofill :_____ dry tons/year

Class A sludge land applied : _____ dry tons / year
Acreage used for Sludge Application/disposal at this site:_____acres
Site Vegetation (such as grass type etc) and # of cuttings: _____

Sewage Sludge only – Please provide information regarding the following 3 items:-

1. Does any of the sludge you have generated or received NOT MEET the concentration limits for the metals listed in Table 3 of "30 TAC §312.43 (b)? Yes _____ No_____
2. Has your field/site reached or exceeded 90% of the cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"? Yes _____ No _____
3. Has sewage sludge been applied to the field/site after 90% of cumulative metal loading rates for any of the metals per Table 2 of " 30 TAC §312.43 (b)" been reached? Yes _____No _____

PLEASE MAIL THE COMPLETED ANNUAL REPORT TO :
Texas Commission on Environmental Quality
Land Application Team (M/C 148)
Wastewater Permitting Section
P.O. Box 13087
Austin, TX 78711-3087

Rev G - 02/05/04-ust

TCEQ **Attachment D**

Quarterly Sludge Summary Report Form

Note 1: If your site has more than one land application field, please submit a separate form for each field.
Note 2: Please place this sheet at the top of your Quarterly Sludge Report.
Note 3. If you have more than one permitted site, then fill-out this form for each one of those sites.
Note 4. Please send a copy of this sheet and all attachments to the local TCEQ regional office.

For TCEQ Quarter _____ Reporting period from _____, to, _____

PERMIT NO.: _____ DATE: _____

NAME OF PERMITTEE: _____

MAILING ADDRESS: _____

_____

CONTACT PERSON: Name: _____ Telephone No: _____

Field No: _____ **(Submit separate form for each field, if site has two or more fields)**

- Class B Sewage Sludge Land Applied : _____ dry tons / quarter
- Treated Domestic Septage - Land Applied : _____ gallons / quarter
  - Method used to treat Domestic Septage: _____
- Water Treatment Plant Sludge - Land Applied: _____ dry tons /quarter
- Class A sludge land applied : _____ dry tons / quarter

a. Acreage used for Sludge Application/disposal at this site:- _____ acres
b. Site Vegetation (such as grass type etc) and # of cuttings:- _____
c. Does any of the sludge you have generated or received DOES NOT MEET concentration limits for any of the metals listed in Table 3 of "30 TAC §312.43 (b)? Yes _____ No _____
d. Site location: Latitude: _____, Longitude: _____
e. Site physical address: _____

_____

Please attach the information regarding the following items (Sewage Sludge only):-

* Please note the following information shall be provided in computer generated report format:
* Please place check mark before each item below to indicate you have attached that item with this report.

_____ 1. Metal concentration, pathogen analysis data and vector attraction certifications of sludge for each source.
_____ 2. Provide a list containing the name and permit number of each source of sludge.
_____ 3. Date of delivery of each load of sludge land applied.
_____ 4. Date of land application of each load of sludge.
_____ 5. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"?
_____ 6. The suggested agronomic rate for the class B sludge.

PLEASE MAIL THE COMPLETED REPORT TO :

Texas Commission on Environmental Quality
Land Application Team (M/C 148)
Wastewater Permitting Section
P.O. Box 13087
Austin, TX 78711-3087

Rev B - 02/05/04-ust

TCEQ Attachment E

Information Sources on Phosphorous Risk Management

- **Certified Nutrient Management Specialists:**

  - "http://soilcrop.tamu.edu/events/index.html".

- **Natural Resource Conservation Service (NRCS) Code 590 Practice Standard:** *This standard addresses the kind, source, placement, form, amount, timing, and application method of nutrients and soil amendments.*

  - "http://www.tx.nrcs.usda.gov/eng/ TexasStandards/Final/ 590tx.pdf".

- **Phosphorous Index:** *This is a simple screening tool to rank vulnerability of fields as sources of phosphorous loss to surface runoff.*

  - "http://www.tx.nrcs.usda.gov/eng/ TexasStandards/Final/ TxTechnote15.pdf".

Note: The website addresses could change from time to time. So, please check for the latest addresses for these sites.

ATTACHMENT B

Technical Summaries
WQ4745000
WQ4746000

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	American Water Services Residuals Management, Inc.
Permit No.	WQ0004745000
Regulated Activity:	Beneficial Land Application of Waste Water Treatment Plant (WWTP) Sewage Sludge and Water Treatment Plant (WTP) sludge
Type of Application:	Permit
Request:	New Permit
Authority:	Texas Water Code §26.027; 30 TAC Chapters 281, 305, 312,and Texas Health and Safety Code (THSC) §361.121; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

The executive director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit will expire five years from the date of issuance in accordance with 30 TAC Chapter 312, and THSC section 361.12.

REASON FOR PROJECT PROPOSED

American Water Services Residuals Management, Inc., has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit, Permit No. WQ0004745000, to authorize the beneficial land application of WWTP sewage sludge at a rate not to exceed 7.2 dry tons/acre/year.

PROJECT DESCRIPTION AND LOCATION

The land application site is located approximately one mile east of the City of Thrall, and northeast of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063 in Williamson County, Texas.

No discharge of pollutants into water in the State is authorized by this permit.

PROPOSED PERMIT CONDITIONS

Sludge Provisions are included in the draft permit according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal and Transportation. The draft permit authorizes the land application of sewage sludge for beneficial use on 340.23 acres.

SUMMARY OF CHANGES FROM APPLICATION

The agronomic rate was changed from 10.16 dry tons/acre/year to 7.2 dry tons/acre/year by using the most limiting nitrate nitrogen soil for the calculation to find the nutrient available in soil.

Water Quality Assessment Team changes: The application area was reduced from 349.63 acres to 340.23 acres due to the buffering of the Tinn (Tn) series from flooding and active erosional processes found at the site, and the Ferris-Heiden (FeH) series was buffered due to surface soil wetness. Also, a hand dug well was buffered by 150 feet.

SUMMARY OF CHANGES FROM EXISTING PERMIT

None. This is a new permit.

BASIS FOR PROPOSED DRAFT PERMIT

The following items were considered in developing the proposed permit draft:

1. Application received on June 7, 2004 and additional correspondence received on October 11, 2004, February 21, 2005, April 26, 2005, and May 9, 2005.
2. Existing TCEQ Registration No.: None.
3. Interoffice Memorandum from the TCEQ Regional Office (MC Region 11), Water Quality Assessment Team, Water Quality Division.
4. Separate assessments by the TCEQ Regional Office (MC Region 11), and the Water Quality Assessment Team, Water Quality Division.

PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application. This notice sets a deadline for public comment.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application contact Mr. Brian Sierant at (512) 239-1375.

Brian Sierant
Land Application Team
Wastewater Permitting Section (MC 148)
Water Quality Division

5/27/05
Date

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	American Water Services Residuals Management, Inc.
Permit No.	WQ0004746000
Regulated Activity:	Beneficial Land Application of Waste Water Treatment Plant (WWTP) Sewage Sludge and Water Treatment Plant (WTP) sludge.
Type of Application:	Permit
Request:	New Permit
Authority:	Texas Water Code §26.027; 30 TAC Chapters 281, 305, 312,and Texas Health and Safety Code (THSC) §361.121; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

The executive director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit will expire five years from the date of issuance in accordance with 30 TAC Chapter 312, and THSC section 361.121.

REASON FOR PROJECT PROPOSED

American Water Services Residuals Management, Inc., has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit, Permit No. WQ0004746000, to authorize the beneficial land application of WWTP sewage sludge at a rate not to exceed 7.4 dry tons/acre/year.

PROJECT DESCRIPTION AND LOCATION

The land application site is located approximately two miles northeast of Thrall, 1.5 miles north of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063, 1/2 mile east of the intersection of County Road 430 and Farm-to-Market Road 1063 in Williamson County, Texas.

No discharge of pollutants into water in the State is authorized by this permit.

PROPOSED PERMIT CONDITIONS

Sludge Provisions are included in the draft permit according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal and Transportation. The draft permit authorizes the land application of sewage sludge for beneficial use on 285.41acres.

SUMMARY OF CHANGES FROM APPLICATION

The agronomic rate was changed from 10.01 dry tons/acre/year to 7.4 dry tons/acre/year by using the most limiting nitrate nitrogen soil for the calculation to find the nutrient available in soil.

The application area in the original application area and the Notice of Receipt and Intent to Obtain a Beneficial Land Use Permit was changed from 287.37 acres to 317.37 acres.

Water Quality Assessment Team changes: The application area was reduced from 317.37 acres to 311.08 acres due to the buffering of slopes greater than 8%. Also, the hand dug well with a brick liner and a concrete lid (old home site), observed north from the southernmost gate entrance on the southeast corner of the property was buffered from sludge application by 150 feet. The had dug well along the fence line on the western side of the most easterly hill was buffered from sludge application by 150 feet.

The permittee shall install two (2) monitoring wells where the Altoga Silty Clay Loam - 3% to 5% eroded (AgC2) soils exhibited wetness along the fence line near a shallow cement collar. The monitoring wells will observe the development of seasonal shallow groundwater. Also, prior to application of sludge, the permittee shall sample the shallow groundwater in the two hand dug wells. The groundwater from these two monitoring wells shall be analyzed for Total Kjeldahl Nitrogen (TKN) as Total Nitrogen, Ammonia as Nitrogen, Nitrate as Nitrogen, Total Dissolved Solids (TDS), Chlorides, and fecal coliform.

Sampling shall occur on a semi-annual schedule during March and September of each year. The water quality results shall be submitted to the TCEQ Compliance and Monitoring Section (MC 224) and the Water Quality Assessment Team (MC 150) with 60 days from the semi-annual sampling date. A copy of the water quality results shall also be retained onsite for inspection. The hand dug wells shall also have a concrete lid to prevent water from entering the surface.

The applicant shall install one (1) up gradient soil monitoring device on the hill and one (1) soil monitoring device placed near the fence/gate leading to the broken collar hand dug well. The monitoring wells well be cemented from the surface to 1 foot below the ground level and have a 2 foot screen or micro pore perforations to allow shallow developed water to enter the well bore.

The monitoring wells shall be monitored before any sludge application from the hillside to the fence line. If water has accumulated in either of the monitoring wells, no sludge will be applied to the located hill down to the fence line buffer area. A log of these observations shall be kept the site operator and made available for field inspection by the TCEQ Region 11 Office.

The permittee shall not apply sludge to the gulley areas, until reconstructive terracing stabilizes the gully areas and cover vegetation is reestablished. The reconstructive effort shall be documented in a Reconstructive Terracing Management Plan that will be submitted for the approval to the Water Quality Assessment Team (MC 150) prior to land application of sludge to the gulley areas at this site.

The plan shall describe the progress of the reconstructive terracing efforts and show the reconstructive area with established grasses and stabilized gully areas along with cover crops suitable for growth on the reconstructed slopes.

The land application area was reduced from 317.37 acres to 285.41 acres due to the addition of buffers that reflected the observations conducted during a site investigation on December 6, 2005 by the Water Quality Assessment Team.

SUMMARY OF CHANGES FROM EXISTING PERMIT

None. This is a new permit.

BASIS FOR PROPOSED DRAFT PERMIT

The following items were considered in developing the proposed permit draft:

1. Application received on June 7, 2004 and additional correspondence received on October 11, 2004, February 21, 2005, April 26, 2005, and May 9, 2005, and March 28, 2006.
2. Existing TCEQ Registration No.: None.
3. Interoffice Memorandum from the TCEQ Regional Office (MC Region 11), Water Quality Assessment Team, Water Quality Division.
4. Separate assessments by the TCEQ Regional Office (MC Region 11), and the Water Quality Assessment Team, Water Quality Division.

PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application. This notice sets a deadline for public comment.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application contact Mr. Brian Sierant at (512) 239-1375.

Brian Sierant
Land Application Team
Wastewater Permitting Section (MC 148)
Water Quality Division

5/11/06
Date

ATTACHMENT C

Compliance History
WQ4745000
WQ4746000

Compliance History

Customer/Respondent/Owner-Operator:	CN601301732	American Water Residuals Management, Inc.	Classification: AVERAGE	Rating: 1.66
Regulated Entity:	RN104372792	STILES RANCH SOUTH	Classification: AVERAGE BY DEFAULT	Site Rating: 3.01
ID Number(s):	SLUDGE		PERMIT	WQ0004745000
	SLUDGE		PERMIT	WQ0004745000
Location:	1 mile East of Thrall, NE of the intx of US Hwy 79 and FM 1063.		Rating Date: September 01 06	Repeat Violator: NO
TCEQ Region:	REGION 11 - AUSTIN			
Date Compliance History Prepared:	March 14, 2007			
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.			
Compliance Period:	June 07, 2004 to March 14, 2007			

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Brian Sierant Phone: N/A

Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? Yes
2. Has there been a (known) change in ownership of the site during the compliance period? No
3. If Yes, who is the current owner? N/A
4. If Yes, who was/were the prior owner(s)? N/A
5. When did the change(s) in ownership occur? N/A

Components (Multimedia) for the Site :

A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

N/A

B. Any criminal convictions of the state of Texas and the federal government.

N/A

C. Chronic excessive emissions events.

N/A

D. The approval dates of investigations. (CCEDS Inv. Track. No.)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

F. Environmental audits.

N/A

G. Type of environmental management systems (EMSs).

N/A

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A

Compliance History

Customer/Respondent/Owner-Operator:	CN601301732	American Water Residuals Management, Inc.	Classification: AVERAGE	Rating: 1.66
Regulated Entity:	RN104372750	STILES RANCH NORTH	Classification: AVERAGE BY DEFAULT	Site Rating: 3.01
ID Number(s):	SLUDGE	PERMIT		WQ0004746000
Location:	2 miles NE of Thrall 1.5 miles North of the intx of US Hwy 79 and FM 1063, .5 East of the intx of CR 430 and FM 1063		Rating Date: September 01 06	Repeat Violator: NO
TCEQ Region:	REGION 11 - AUSTIN			
Date Compliance History Prepared:	March 14, 2007			
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.			
Compliance Period:	June 07, 2004 to March 14, 2007			

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Brian Sierant Phone: N/A

Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? Yes
2. Has there been a (known) change in ownership of the site during the compliance period? No
3. If Yes, who is the current owner? N/A
4. If Yes, who was/were the prior owner(s)? N/A
5. When did the change(s) in ownership occur? N/A

Components (Multimedia) for the Site :

A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

N/A

B. Any criminal convictions of the state of Texas and the federal government.

N/A

C. Chronic excessive emissions events.

N/A

D. The approval dates of investigations. (CCEDS Inv. Track. No.)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

F. Environmental audits.

N/A

G. Type of environmental management systems (EMSs).

N/A

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A

ATTACHMENT D

Executive Director's Response to Public Comments (RTC)
WQ4745000
WQ4746000

Proposed New TCEQ Permit No. WQ0004745000

Application by AMERICAN WATER SERVICES RESIDUAL MANAGEMENT, INC., for TCEQ Permit No. WQ0004745000	§ § § §	Before the TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment (Response) on the application by American Water Services Residual Management, Inc. (Applicant), for a new TCEQ Permit Number WQ0004745000 and on the Executive Director's preliminary decision on the application. As required by Title 30 of the Texas Administrative Code, Section 55.156, before a permit is issued, the Executive Director prepares a response to all timely, relevant and material, or significant, comments. The Office of Chief Clerk timely received comment letters and comments at the public meeting. The following people sent in identical comment letters and will be known as **Group 1**:

Beverly Aikens,
Dianne Ake,
Jeff Ake,
Jeanie Alderete,
Dorothy Anderson,
Jan Armentrout,
Charles Aultshroder,
Carrol Bachmayer,
Gene Baird,
Russel Balusek,
Sharon Betak,
Lou Biar,
Franki Blanks,
Glenda Bohac,
Johnnie Bohac,
Jerry Bounds,
Keith Bower,
Jean Brian,
Lucille Brinkmeyer,
Arleen Brosch,
Elaine Brown,
Lawrence Brown,
Betty Bullin,
Don Bunner,
Tamara Bunner,
W. R. Burns,
Jack Burton,
Lajuana Burton,
Newton Butts,
Joanne Buzan,
Tony Ray Buzan,
Hugh Caffey, Jr.,
Richard Carillo,
Roy Carillo,
Billy Carlson,
Doris Carlson,
Ed Carlson,
Craig Carothers,
Phyllis Carothers,
L'Tisha Carpenter,
Irene Cast,
Melvin Cast,
Antonio Castro,
Dwaine Cervenka,
Charles Clark,
Deborah Clark,
H. Clark,
Jeannette Clark,

Ruth Clark,
Steve Clark,
David Clawson,
Becky Cmerek,
Mike Cmerek,
Cheryl Collins,
Elizabeth Copple,
John Paul Crouch,
Betty Ann Cruz,
Tommy Cruz,
Donna Cryer,
Barbara Dale,
Allen Darr,
Catherine Hodges Darr,
Connie Davenport,
Gordon Druesow,
Patricia Dumbeck,
Marie Dunkle,
Vernell Dvorak,
Carolyn Eiben,
David Evans,
Frank Felton,
Marcia Felton,
Brian Fikae,
Nicole Filz,
Bethany Fisher,
Jennifer Fisher,
Jon Fisher,
David Fussel,
Joyce Fuller,
Dennis Gage,
Ernestine Gage,
Rebecca Garcia,
W. P. Garrett,
Pam Gender,
Bobby Ging,
Debbie Ging,
Dorothy Ging,
Gilbert Ging,
Hope Ging,
Peggy Ging,
Sidney Ging,
Tracie Ging,
Eric Glen Garcia,
Diane Gomez,
Janie Gomez,
Martin Gonzalez,
Barbara Gordel,
Janiece Grimes,
Leonard Grimes,
Linda Grimm,
Brian Gross,
Brianna Gross,
Ginger Gross,
Bonner Hardegree,
Suzanne Hardegree,
Herman Harris,
Majorie Harris,
Randy Hehmann,
Diana Hejl,
Floyd Hejl,
Juanita Hejl,
Mary Helen Henderson,
Eldon Hengst,
Mary Hengst,
Mimzie Herklotz,
Santiago Hernandez,
Santos Hernandez,
Lisa Heselmeyer,
Henry Hoffenek,
Jennifer Hoffman,
Malcom Holder,
Betty Hubbard,
Melody Huber,
Dianna Huff,
Louis Huff,
William Humphrey,
Dena Jaeger,
Mark Jaeger,
Karol Jarmon,
Rosalie Jechow,
Jose Jimenez,
James Jirasek,
Leann Johnson,
Anita Jones,
Caroline Jones,
Lonnie Jones,
Barbara Kelm,

Benice Kelm,
Harvey Kelm,
Johnny Kelm,
Horace Kemmert,
Yvonne Kemnitz,
Helen Kerlin,
Kelby Kerlin,
Doris Kosik,
Donald Kunze,
James Lantzsch,
James Lantzsch, Jr.,
Todd Lantzsch,
Larry Lashley,
Michael Latouf,
Jack Lee,
Jack Lee, Jr.,
A. J. Lehman,
Arthur Lehmann,
Rudy Leyendecker,
Elroy Lieberum,
Emma Lillis,
Sarah Lincoln,
Isabelle Locklin,
April Lucio,
E. Lucio,
Marcelino Lucio,
Avis Lukas,
Evelyn Mann,
Fred Mares,
Kathy Mares,
Paul Martin,
Yvette Martinez,
Sherry Marx,
Troy Marx,
Eva McKendrick,
Gene McKendrick,
Melissa Meaker,
Peggy Meaker,
Robert Meaker,
Cedro Mendez,
Jilberto Mendez, Jr.,
Courtney Michna,
Luane Michna,
Dennis Mikulencak,
Carl Moehnke,
Douglas Moehnke,
Joy Moehnke,
Paul Moerbe, Jr.,
Joe Moldenhour,
Ray Moore,
Dawn Morton,
John Morton,
Misty Morton,
Paul Brian Morton,
Corey Moss,
David Mucha,
Arline Muegge,
Kristine Nelson,
Jauanna Newman,
Anthony Niemtschk,
Charles Nipps,
Glenn Noble,
Sharon Noble,
Norma Olvera,
Leonard Ortez,
Bonnie Ortiz,
Jennifer Osbourne,
Matthew Overmier,
Allen Patschke,
Donna Patschke,
Nolan Patschke,
Viola Patschke,
Joseph Pausewana,
Sheila Pausewang,
Tandie Payne,
Edward Pierritz,
Frances Pierritz,
Virdie Pircher,
Richard Pitts,
Connie Poe,
Dusty Pope,
Lynda Raffel,
Cyndy Raiford,
James Raiford,
Jason Ramirez,
John Ramirez,
Omelda Ramirez,
Thomas Ramirez,

Carolyn Reinmert,
Christine Renteria,
Ray Renteria,
Daniel Rice,
Carl Rider,
Jennifer Rider,
Shari Rider,
Beatrice Roberson,
Marvin Rodenbeck,
Norma Rodriquez,
Robert Rodriquez, Jr.,
Shirley Roepke,
Evelyn Rohlack,
Lucille Rosenthal,
Edward Roznovak,
Helen Roznovak,
Larry Safarik,
Paula Safarik,
H. L. Sakewitz,
Tommie Schiller,
Lornie Schneider,
Melinda Schneider,
Georgia Schrader,
Jesse Schrader,
Gus Schramm,
Gus Schramm III,
Randall Schramm,
Danny Schroder,
Adele Schwettman,
Doris Schwettman,
Melvin Schwettman,
Bernice Sciortino,
D. R. Sciortino,
Valerie Senior,
Michael Sharp,
Viola Shiller,
Dorothy Skrhak,
Caroline Sladek,
Eugene Sladek,
Harvey Sladek,
Larry Sladek,
Pat Smith,
Tracy Smith,
Tracy Spence,
Alice Stojanik,
Connie Stojanik,
Robert Stojanik,
Diane Stolle,
Justin Stolle,
Clay Suarez,
Douglas Swenson,
Mary Thomas,
Phyllis Tipton,
Richard Tipton,
Kimberly Todd,
Clifford Tomancak,
Dodi Tomancak,
Rick Tooley,
Lori Towery,
Salina Towery,
Harvey Townsend,
Cynthia Tschantz,
Gary Ubanek,
Manuel Vargas,
Rose Marie Vargas,
Hilda Vasquez,
Joe Vasquez,
Rita Vasquez,
Janet Vitek,
Beth Walker,
Jeff Walker,
Maggie Walker,
Tim Walker,
Sandy Warner,
Carl Washington,
Dora Washington,
Donald Watson,
Phillip Webster,
John Paul Wernecke,
Mrs. John Wernecke,
Cindy Widner,
Julius Widner,
Kevin Widner,
Sue Widner,
Lille Wieringa,
Edward Williams,
Nicole Williams,
Jenny Williamson,

Carolyn Wuensche,
Alan Wuthrich,
David Wuthrich,
James Wuthrich,
Rose Wuthrich,
Robert Yunk, and
Mildred Zamorsky.

The following people sent in identical comment letters and will be known as **Group 2**:

Dorothy Anderson,
Gene Ash,
Karen Ash,
Alberto Banda,
Evelyn Bauerschlag,
Frankie Blanco,
Sherry Boothe,
Jean Brian,
Freeda Brooks,
Rick Broz,
Kelly Brymer,
Betty Bullin,
Don Bunner,
Tamara Bunner,
Jack Bunton,
Lynne Cardenas,
Crystal Carpenter,
David Carpenter,
Antonio Castro,
Josephine Castro,
Karen Chandler,
Richard Chandler,
Charles Clark,
Deborah Clark,
Jeanette Clark,
Ruth Clark,
Wendy Coffs,
Donna Cryer,
Darlene Dodson,
Marlene Drummond,
Delan Dukes,
Mari Dunkle,
Sabrina Dunkle,
Danny Dunn,
James Dvorak,
Vernell Dvorak,
Mark Ely,
D. Evans,
Liz Ford,
Pamela Ford,
Cyndee Fowler,
Louis Francis,
Bill Garrett,
Andersen Gasten,
Hope Ging,
Benito Gomez,
Diane Gomez,
Frankie Gomez,
Beatrice Gonzales,
Janie Gonzales,
Martin Gonzales,
Patricia Haining,
Bruce Hall,
Donna Hall,
James Hendrix,
D. Hill,
N. Hill,
Nancy Hill,
Sue Hinojosa,
Skip Hobbs,
Sharon Hobbs-Moon,
Clayton Holder,
Malcom Holder,
Jose Jimenez,
Brian Johle,
Penny Johle,
Leann Johnson,
James Kemnitz,
Yvonne Kemnitz,
Tracy Kerzee,
Vernon King,
Vanna Kirk,
Bonnie Krueger,
Donald Kunze,

Clay Laake,
Isabelle Locklin,
April Lucio,
Eva Lucio,
Marcelino Lucio,
Marcelino Lucio III,
Jose Madrigal,
Evelyn Mann,
Joyce McCown,
Michael McCoy,
Erica McDaniel,
M. McNay,
Peggy Meaker,
Cindy Melcher,
Julia Mendez,
Pete Mendy,
M. Moerbe,
V. Moerbe,
Cecilia Montoya,
Paul Morley,
Sharon Morris,
John Morton,
Misty Morton,
Clyde Newman,
Jauanna Newman,
Anthony Niemtschk,
Steve Noble,
Socorro Ortega,
Aurora Ortiz,
Katherine Page,
Johnie Palano,
Junaita Paldrach,
Ronnie Pam,
Emile Parnell,
Todd Paterson,
Charlene Patschke,
Estella Perez,
Daniel Pitts,
Joe Price,
W. F. Puckett,
Colleen Qualls,
Doris Quintero,
Celestino Ramirez,
Jason Ramirez,
Penny Rennanocker,
Beatrice Roberson,
Norma Rodriquez,
Doris Rohlack,
Amy Scheffel,
Gus Schramm,
Joey Schillings,
Bud Smith,
Pat Smith,
Selena Stanford,
Cheryl Stiles,
Alice Stojanek,
Connie Stojanek,
M. Taylor,
Coy Tillotson,
Phyllis Tipton,
Cindy Tooley,
Salina Towery,
Charles Urbanek,
Richard Valadez,
Wendy Valadez,
Carrie Vallie,
Vera Vizena,
Herman Wells,
Alfred Wernli,
Jenny Williamson,
E. B. Wilson,
Elida Yanez,
James Young,
Lee Young,
Amanda Youngblood, and
Earlene Youngblood.

The following people sent in individual comment letters, added individual comments on a form letter, or spoke at the public meetings:

Lawrence Brown,
JoAnne Buzan,
Tony Ray Buzan,
Antonio Carrillo,

Mary Carroll,
Sarah Chah,
Steve Clark,
Willard L. Click,
Becky Cmerek,
Mike Cmerek,
Gordon Druesdow,
Dan Engelhardt,
Jason Faulkner,
Hope Ging,
Peggy Ging,
Sidney Ging,
Ginger Gross,
Randy Hehmann,
Cullen Johnson,
Morris Krueger,
Representative Mike Krusee,
Raymond Lenz,
Clemente and Paula Martinez,
Terry Mendez,
Becky Milholland,
Jeff Overmier,
Allen G. Patschke,
Connie Poe,
Ray Rentería,
Amy Schiffel,
Chris Schiffel,
Mark Sobotik,
Elizabeth Williamson, and
Earlene Youngblood.

This Response addresses all comments received, whether or not withdrawn. If you need more information about this permit application or the wastewater permitting process, please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.state.tx.us.

BACKGROUND

Description of Facility

American Water Services Residuals Management, Inc., has applied to the TCEQ for a new permit that would authorize the beneficial application of wastewater treatment plant sewage sludge and drinking water treatment plant sludge to agricultural land at an annual rate not to exceed 7.2 dry tons per acre per year on 232.62 acres of agricultural land with a site of approximately 409.52 acres. The facility will be located approximately one mile east of the City of Thrall and northeast of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063 in Williamson County, Texas.

Procedural Background

The application was received on July 7, 2004, and declared administratively complete on August 31, 2004. Notice of Receipt of Application and Intent to Obtain a Beneficial Land Use Permit (NORI) was published September 7, 2004, in the *Taylor Daily Press*. The TCEQ Executive Director completed the technical review of the application on May 27, 2005, and prepared a draft permit. Notice of Application and Preliminary Decision and Notice of Public Meeting for Beneficial Land Use Permits (NAPD) was published August 2, 2005, in the *Taylor Daily Press*. A public meeting was held on September 1, 2005, in Thrall, Texas, and the comment period closed at the conclusion of that public meeting. This application was administratively complete on or after

September 1, 1999; therefore, this application is subject to the procedural requirements adopted pursuant to House Bill 801 (76th Legislature, 1999).

Access to Rules, Laws and Records

Secretary of State website for all administrative rules: www.sos.state.tx.us
TCEQ rules in Title 30 of the Texas Administrative Code: www.sos.state.tx.us/tac/ (select "TAC Viewer" on the right, then "Title 30 Environmental Quality")
Texas statutes: www.capitol.state.tx.us/statutes/statutes.html
TCEQ website: www.tceq.state.tx.us (for downloadable rules in WordPerfect or Adobe PDF formats, select "Rules, Policy, & Legislation," then "Rules and Rulemaking," then "Download TCEQ Rules")
Federal rules in Title 40 of the Code of Federal Regulations: www.epa.gov/epahome/cfr40.htm
Federal environmental laws: www.epa.gov/epahome/laws.htm

Commission records for this facility are available for viewing and copying and are located at TCEQ's main office in Austin, 12100 Park 35 Circle, Building F, 1st Floor (Office of Chief Clerk, for the current application until final action is taken), and at TCEQ's Region 11 Office in Austin at 1921 Cedar Bend Drive, Suite A150. The application for this facility has been available for viewing and copying at the City of Taylor Public Library, 400 Porter, Taylor, Texas, since publication of the NORI and the application draft permit, statement of basis/technical summary, and Executive Director's preliminary decision have been available for viewing and copying at the same location since publication of the NAPD.

COMMENTS and RESPONSES

COMMENT 1

Mike Cmerek questions whose sludge is being dumped and how will the sewage be applied.

RESPONSE 1

The sludge sources are the City of Austin Hornsby Bend Wastewater Treatment Plant and the City of Houston Southeast Water Treatment Plant. The sludge will be land-applied with calibrated industrial grade manure spreaders and will be incorporated with a disk.

COMMENT 2

Jeffery Overmier, Tony Ray Buzan, and Morris Krueger question the proposed application rate and how long the sewage sludge will lay on top of the soil.

RESPONSE 2

The application rate at this site is 7.25 dry tons of sludge per acre per year. Under TCEQ rules, the staging of sewage sludge at a land application site may occur for a maximum of seven days. Non-compliance with this rule would result in a violation of the permit.

Incorporation of sludge into the soil is the Applicant's option and depends on the crop to be grown by the owner of the land where the application occurs. Where there is an established, year-round crop, such as grass grown for hay, incorporation may cause damage to the crop. Nevertheless, the established crop helps minimize erosion. Where seasonal crops are to be grown, discing the sludge into the soil between successive plantings is a practical option, and TCEQ's rules require incorporation within 48 hours of application or different buffer zone requirements are triggered.

COMMENT 3

Group 1 has concerns that the Applicant may be dumping tens of thousands of sewage a year on a portion of land located near the City of Thrall. **Mark Sobotik** is concerned about the total tonnage to be applied.

RESPONSE 3

The Applicant asked to land apply 11,783 dry tons of wastewater treatment plant sludge from the City of Austin, and 1,200 dry tons of water treatment plant sludge from the Houston Southeast Water Treatment Plant each year. TCEQ evaluates the request by looking at the characteristics of the different soil types in the application fields and the capacity of the different soil types to process nutrients and critical metals and make them available for plant growth. The amount of sludge allowed to be applied to the fields under the draft permit is based on the most limiting nutrient or metal factor in the soils for each field. Ultimately, the draft permit for the South Stiles fields authorizes the application of only 7.25 dry tons per acre on 232.62 acres, or only about 1,687 dry tons per year total, about 14% of what was requested.

COMMENT 4

Earlene Youngblood questions whether buffer zone vegetation will be provided around the site. Mike Cmerek is concerned if the applicant is going to install ditches and trenches at the site.

RESPONSE 4

No ditches or trenches are proposed for the South Stiles site. TCEQ rules provide for a 50-foot buffer between areas where biosolids are applied and the property boundary. Natural vegetation should be left in the buffer zone.

COMMENT 5

Mike Cmerek and Tony Ray Buzan want to know the compliance record of the company and other satellite companies (that operate under different names) and how many violations are on record if there are any. Ginger Gross is concerned about an average rating.

RESPONSE 5

The permit was reviewed in accordance with TCEQ's rules on compliance history. The compliance history is reviewed for the company and site beginning five years prior to the date the permit was received by the Executive Director until the present day. . The compliance history includes compliance-related components involving all waste media about the site under review. These components include the following (if there are any): enforcement orders, consent decrees, court judgements, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audit and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs and early compliance.

This company and site have each been rated and classified in accordance with TCEQ rules. A company and a site may have one of the following classifications and ratings:

High: rating <0.10 (above-average compliance record)
Average by Default: rating = 3.01 (this category is for new sites that have never operated)
Average: 0.10<rating<45 (generally complies with environmental regualtions)
Poor: 45> rating (performs below average)

This site has a rating of 3.01 and a classification of average by default. The company rating and classification, which is the average of the ratings for all sites the company owns, is 1.69 and average.

COMMENT 6

Mike Cmerek wants to know how long the operator has been doing this, and if the operators have experience with this type of facility, and if the operators' expertise can be evaluated if new to this type of operation.

RESPONSE 6

The TCEQ does not take into consideration the experience level of a site operator when reviewing an application. However, as stated above, the compliance history of both the site and the company are taken into account. A record of the operator's compliance history and correspondence can be found by viewing the compliance history file located at the TCEQ Central Records Office in Austin, or on the TCEQ website at: http://www.tceq.state.tx.us/compliance/enforcement/history/index.html.

COMMENT 7

Group 2, Joanne Buzan, Earlene Youngblood, Amy and Chris Schiffel, and **Sidney Ging** are concerned that metals, pathogens, viruses, and bacteria contained in the sludge that will be applied may be hazardous and cause negative health effects to both humans and animals. **Joanne Buzan** is concerned that the quality of living will be jeopardized. **Group 1, Sarah Chah,** and **Hope Ging** are concerned that children are more exposed to environmental threats and are more susceptible to environmental disease than adults, and that the area will be contaminated with elements that may cause serious illness and maybe even death. **Group 1** and **Connie Poe** believe that there is anecdotal and scientific evidence regarding serious health issues that occur near so-called sludge farms and has concerns and criticism toward the EPA's research by the scientific and political community. **Sarah Chah** has concern that there is no beneficial use for this type of operation in Thrall, Texas. **Joanne Buzan** expressed concern with the problems of asthma in children on the rise and how it relates to airborne pathogens and warm moist air. **Ray Rentería** is concerned that there are practices that are considered dangerous today that were once considered safe. **Morris Krueger** and **Lawrence Brown** are concerned about their families' health. **Gordon Druesdow, Raymond Lenz,** and **Dan Engelhardt** are concerned about airborne pathogens and nearby schools. **Randy Hehmann** is concerned about medical personnel responding to a medical emergency at the property.

RESPONSE 7

The USEPA and TCEQ initiated and approved the practice of land-applying sludge as an acceptable method of recycling. By establishing rules and regulations on land application and fertilization, sludge is kept from contributing to the overgrowth of landfills and the possible increase of utility costs in certain residential areas. Also, the beneficial use of sludge is a useful and economic method to fertilize land for adequate crop growth and is commonly used throughout the nation for activities such as grazing or hay production.

The permit requires monitoring of sewage sludge for heavy metals, pathogens, and other contaminates. There is lab analysis for total metals and pathogens. The extraction and analysis covers other contaminates that may be present. Only sludge meeting set criteria for these contaminates can be used. The US Environmental Protection Agency (USEPA) conducted a risk

assessment when promulgating the regulations. This assessment identified materials of concern and the thresholds below which problems would not exist.

The Applicant must comply with detailed management practices designed to protect human health and the environment. This includes record-keeping requirements and monitoring requirements in TCEQ rules. The draft permit provides that the Applicant must monitor the sewage sludge for ten metals (arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc) as well as reduce pathogens and vector attraction below levels required by TCEQ rules. The draft permit and TCEQ rules require the Applicant to record this information about the sludge that is applied, the number of acres to which sludge is applied, and a description of how the management practices for controlling these pollutants are being met. Periodic site inspections conducted by staff from TCEQ's field offices determine whether these requirements are being met. TCEQ also requires the Applicant to submit quarterly and annual reports that aid in monitoring compliance with specific conditions outlined under TCEQ's rules. Quarterly reports for active facilities are available for viewing at: http://www.tceq.state.tx.us/permitting/water_quality/wastewater/sludge/WQ_sludge_reporting.html. If members of the public identify harmful or unsafe conditions from the facility, the public may contact TCEQ's Region 11 office in Austin at 512-339-2929 or toll-free at 1-888-777-3186. Calls from Williamson County are automatically routed to the Region 11 Office for response Citizen complaints may also be filed on-line at http://www.tceq.state.tx.us/cgi-bin/enforcement/complaints.

Under TCEQ rules, public access to land with a high potential for exposure must be restricted for at least one year after application of sewage sludge. Public access to land with a low potential for exposure must be restricted for at least 30 days after application of the sewage sludge.

COMMENT 8

Tony Ray Buzan questions why the dumping of sewage wastewater or sludge waste into the oceans and was stopped.

RESPONSE 8

The Ocean Dumping Ban Act of 1988, which prohibited all municipal sewage sludge and industrial waste dumping into the ocean after December 31, 1991, was enacted to require the establishment of long-term, land-based disposal alternatives. The Act continues to encourage solutions that have beneficial uses, such as fertilizing crops, instead of disposal methods, such as filling up landfills.

The land application of sewage sludge in this case is for beneficial use by the placement of sludge onto land in a manner that complies with the requirements of state and federal regulations, and does not exceed agronomic needs for a cover crop or any metal or toxic limitations that the cover crop may have.

COMMENT 9

Cullen Johnson and **Elizabeth Williamson** are concerned that, upon examination of the data for areas that have had an application of wastewater treatment plant sludge, there was no established baseline for heavy metals, and it hasn't been established as to whether there is an increase in heavy metals due to application or that heavy metals were present prior to application of the sludge. **Willard Click** is concerned about baseline measurement of metals in the soil.

RESPONSE 9

The Applicant has not previously land-applied sludge at this site. The application requires the Applicant to submit soil samples prior to any land application of any sludge or commercial fertilizer at the site. The samples taken at the site were submitted to a soil testing laboratory and performed according to the methods outlined in TCEQ and EPA guidelines. The samples results showed that the soils met the acceptable soil concentration limits for metals, which are based on the maximum cumulative loading rates found in TCEQ rules.

COMMENT 10

Sarah Chah questions if the operator is going to test each truck load for toxins.

RESPONSE 10

Each individual truck load of sludge that goes to the land application site is not tested. It is the responsibility of the City of Austin and the City of Houston to certify that the sludge generated and used for land application meets the metal ceiling concentrations stated in TCEQ rules. Also, no sludge failing a toxicity characteristic leaching procedure (TCLP) can be taken to any beneficial use site to be land applied. A TCLP analysis is used to determine whether the sludge is deemed hazardous or non-hazardous waste.

It is the responsibility of the Applicant to maintain a record of each individual collection from the two cities and the amount of sludge land-applied in the form of a trip ticket for each load. Copies must be retained and readily available for review by the TCEQ for at least five years.

COMMENT 11

Mike Cmerek, Earlene Youngblood, and **Mary Carroll** question the road maintenance and how litter and mud will be controlled on the road. **Joanne Buzan** has concerns that traffic will be greater and that roads and bridges may not be designed to handle heavy machinery and trucks on a constant and frequent basis.

RESPONSE 11

The TCEQ does not have jurisdiction over traffic or roads. On the issue of traffic, it is commonly assumed in comments that there will be more truck traffic than is generally the case. The number of loads will depend on how much water is in the material that is applied and the size of trucks used. The Applicant might not apply evenly throughout the year, so there could be considerably more loads on some days and none for weeks or months thereafter. There can be dust problems from vehicles on dirt roads, but it is unlikely that the vehicles servicing this site will cause any more problem than the traffic in that area. If problems occur on county roads, the county is responsible for taking action. If they occur on the site, the Applicant must take action to control the dust. The requirements for these actions are covered in TCEQ rules. Noise from vehicles is covered under traffic laws of the state and local ordinances, which are not under the TCEQ's jurisdiction.

Application of sludge is prohibited during rainstorms or during periods in which surface soils are water-saturated. Therefore mud from the wheels of application vehicles on roads and highways should not be a problem.

COMMENT 12

Earlene Youngblood wants to know how long the drivers have been doing this and what type of traffic flow pattern has been set.

RESPONSE 12

The TCEQ does not consider the operator or transporter experience level when reviewing a sludge beneficial-use application. However, as stated above, the permit was reviewed in accordance with TCEQ's compliance history rules. A compliance history is reviewed for the company (which would include the drivers hauling the sludge) and site for the period beginning five years prior to the date the permit was received by the Executive Director.

An applicant is not required to submit the route or a traffic flow pattern from which the sludge will be transported. It is the responsibility of each registered hauler to practice best management practices when transporting the sludge from the facility to the land application site.

COMMENT 13

Joanne Buzan questions what the economic effects will be on the community, what financial assurances have been made to ensure problems can be handled now, and when and if there ever is a closure. **Group 2, Becky Cmerek, Mike Cmerek, Amy and Chris Schiffel,** and **Joanne and Tony Ray Buzan** have concerns that there will be negative effects on property values, and wonder who is going to be responsible for the loss of these property values, wages and health expenses, and if there are any guarantees that have been made concerning property value **Cullen Johnson** and

Elizabeth Williamson are concerned that the land application site area is located too close to the City of Thrall and a number of small farms and residences. **Cullen Johnson** and **Elizabeth Williamson** also have concerns that the application of wastewater treatment plant sludge will result in a current tenant moving and the possibility of future rentals in question, and that the current tenant will move if application takes place. **Ray Rentería, Hope Ging, Sidney Ging, Allen Patschke, Peggy Ging, Willard Click,** and **Jason Faulkner** are concerned about depreciation of property values on adjacent land.

RESPONSE 13

The TCEQ is tasked by the Texas Legislature with protecting the quality surface and ground water in the state. The TCEQ does not have jurisdiction under the Texas Water Code or its regulations to consider property values, the marketability of adjacent property, or economic development in its determination of whether to issue a water quality permit.

On a regular basis, land application permits are issued for five years. The TCEQ grants the permittee the opportunity to apply for a renewal of the permit. There are no limits to the number of times a permitted site can be renewed. However, each time (every five years) a permit application is submitted for a renewal, the application review process follows the same steps as a new permit application. TCEQ rules do not require the site operator to submit a closure plan or report when a land application permit expires. TCEQ rules do not restrict the Applicant's choice of a land application site. However, the Applicant must operate in a manner to prevent nuisances, such as preventing sludge debris from blowing or running off site boundaries or into surface waters, and the Applicant must minimize objectionable odors by taking action such as incorporating the sludge into the soil. TCEQ rules also require a 750-foot buffer zone between the proposed land application field within the site and established schools, institutions, businesses or residences. In addition, TCEQ rules require a 50-foot buffer zone from the property boundaries and a 200-foot buffer zone from all surface waters if the sludge is not incorporated into the soil.

COMMENT 14

Earlene Youngblood questions if the applicant provided a cost / benefit analysis and that the applicant should consider the amount of money spent developing and maintaining the proposed technology and if it is in the best interest for the public.

RESPONSE 14

TCEQ rules do not require the Applicant to provide a cost/benefit analysis when submitting an application. It is the Applicant's responsibility to determine the types of technology that will be used at the site and the economic effects relating to the development and maintenance that the operation will have on the company.

COMMENT 15

Group 2, Steve Clark, Joanne Buzan, Tony Ray Buzan, and Sidney Ging are concerned about the odor of sewage and whether or not there will be any monitors set up to measure the odor emitted by the sewage sludge waste. Cullen Johnson and Elizabeth Williamson are concerned that, although all applications are plowed in to cut down on air pollution, the time of application allows for air pollution to happen. Allen Patschke, Ginger Gross, Peggy Ging, and Antonio Carrillo are concerned about odor.

RESPONSE 15

TCEQ has established management requirements to control odor and air pollutants at land application sites. The draft permit incorporates these requirements. The draft permit does not allow the operator to maintain or create any nuisance conditions at the land application site. The operator must operate the proposed land application site in a manner to prevent public health nuisances. The operator must prevent sludge debris from blowing or running off site boundaries or into surface waters. The operator must minimize dust migration from the site and from access roadways and must minimize objectionable odors through incorporation of sludge into the soil within 48 hours or by taking other corrective action. The draft permit also includes buffer restrictions that do not allow a land application area to be located closer than 750 feet to a business or occupied residential structure or closer than 50 feet to a public right-of-way or property boundary. The management restrictions and buffer zone setbacks were established to minimize any off-site odor problems.

The public may report possible violations of the draft permit or regulations, including nuisance odor violations, of a facility in Williamson County by contacting the TCEQ Region 11 office in Austin at 512-339-2929, or the statewide toll-free number at 1-888-777-3186. Calls to the statewide toll-free number from Williamson County are automatically routed to the Austin regional office. Citizen complaints may also be filed on-line at http://www.tnrcc.state.tx.us/cgi-bin/enforcement/complaints. If the facility is found to be out of compliance with the terms or conditions of its permit or of TCEQ regulations, it may be subject to enforcement action.

COMMENT 16

Group 2, Cullen Johnson, and Elizabeth Williamson have concerns about possible run-off into creeks and tanks where cattle drink from. Jeffrey Overmier and Tony Ray Buzan expressed concerns about how assurance is provided to downstream property owners that pollutants and pathogens are not being transported to their property and if the neighbors were visited to check on the danger from run-off and air pollution. Allen Patschke, Morris Krueger, Gordon Druesdow, and Ginger Gross are concerned about stream contamination. Lawrence Brown is concerned about contamination downstream to the coast.

RESPONSE 16

Runoff could arise from one source: rain events. Rain events cannot be controlled, but the low slopes at the site (between 0 to 5%) will greatly reduce any potential for the rain to carry sludge off the site. The ability of water to carry materials is directly related to its speed, and increases as a square of the velocity of the water. For storm water, the speed of runoff is directly related to the slope of the land. Therefore, the low slopes in this area will prevent rain from moving materials off the site at any appreciable rate. Coupled with the buffer zones, the low slopes greatly reduce any potential for contamination of surrounding areas.

TCEQ rules require that sludge and septage be applied to land in a manner that prevents them from entering water in the state. To ensure that this is achieved, the Applicant is required to maintain a buffer zone of 200 feet between the application area and existing surface water bodies. It is also required that sludge be applied at a rate equal to the nitrogen uptake rate of the plants being grown (the agronomic rate), thus ensuring that the nutrients are fully utilized by the plant and none are available for horizontal seepage into groundwater or lateral seepage into surface water bodies. The permittee must manage the site in a manner so that sludge does not run off the site. Where runoff from the application area is evident, the operator must cease further application until the condition is corrected. Application is prohibited during periods in which surface soils are water-saturated, frozen, or snow-covered.

Land application of treated sludge at the appropriate agronomic rates on soils with low permeability and recommended slopes while observing the buffer zones will not adversely affect surface water quality. As with any material used in agriculture, it is likely that small amounts of these materials will be carried off site during major rain events. However, the regulations on the materials and amounts used provide sufficient protection for the surrounding areas, and the large dilution factor from such rain events will prevent any significant contamination of adjacent areas. These materials are no more harmful than other materials commonly used in agriculture.

COMMENT 17

Jeffery Overmier is concerned if there will be erosion control devices required to protect downstream properties. **Sidney Ging** is concerned about erosion control.

RESPONSE 17

The land application site provides for a 200 foot buffer from biosolid application to the centerline of Spring Creek. The 200 feet will provide the vegetative area needed to filter nutrients. An area with greater than 8% slopes on the site was also identified and was added to the areas that will not receive sludge application.

COMMENT 18

Group 2 is concerned that there will be a transmission of viruses and diseases through flies and wildlife. Sarah Chah is concerned if there is a non-lethal control of vectors such as scavenger birds at the land application site.

RESPONSE 18

Sludge intended for beneficial land use is required to be treated to reduce its attraction for vectors (which limits the potential for transmitting diseases) by reducing odors. TCEQ rules outline specific requirements for vector attraction reduction. Additionally, if the site does attract vectors, this problem is considered to be a nuisance condition, which the permit and rules specifically prohibit. Should such a problem occur, the site operator must take an appropriate step to correct it immediately.

There is no requirement that vectors be eliminated from a beneficial use site. Such a requirement would not be reasonable because of the pervasive presence of flies and other vectors such as wildlife in agriculture operations and on land in general. The requirement is that the sewage sludge be treated in order to reduce the attraction of vectors to it. As shown in Appendix F of the application, this treatment is being done at each of the wastewater treatment plants that is producing sludge that may be used at this site.

COMMENT 19

Cullen Johnson and **Elizabeth Williamson** are concerned that it is still not proven that all pathogens have been destroyed in the treatment of the wastewater treatment plant sludge. Data was not shown, and **Jeffery Overmier** asks what the method and monitoring frequency will be of pathogen and vector attraction reduction. **Sidney Ging** and **Ginger Gross** are concerned about vector attraction.

RESPONSE 19

For sewage sludge to be classified as Class B with respect to pathogens, one of the pathogen reduction alternatives as stated in TCEQ rules must be used prior to land application of sewage sludge. For this particular land application site, the Applicant has chosen the pathogen reduction option to reduce the density of fecal coliform.

The method of this option is to take a minimum of seven samples of the sewage sludge that is collected within 48 hours of the time the sewage sludge is land applied each monitoring episode for the sewage sludge. The geometric mean of the density of fecal coliform for the samples collected shall be less than either 2,000,000 most probable number per gram of total solids (dry weight basis) or 2,000,000 colony forming units per gram (cfu/g) of total solids (dry weight basis). In the case of

this particular land application site, the geometric mean result from the City of Austin sewage sludge is 214,915 cfu/g.

One of the vector attraction reduction options in TCEQ rules must be used prior to or after land application of the sewage sludge. For this site, the Applicant has chosen a lab demonstration of volatile solids reduction anaerobically. The mass of volatile solids in the sewage sludge is reduced by a minimum of 38% as shown in a lab analysis from the City of Austin Hornsby Bend Wastewater Treatment Plant.

In regards to the drinking water treatment plant sludge source, the rules do not require submission of an option for pathogen or vector attraction reduction.

COMMENT 20

Joanne Buzan questions how completely sewage sludge will be rendered non-hazardous and non-threatening.

RESPONSE 20

The draft permit only allows the land application of sewage sludge and water treatment plant sludge as defined in TCEQ rules. Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in treatment works that includes, but is not limited to, domestic septage, scum, or solids removed in primary, secondary, or advanced wastewater treatment processes; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sludge generator or grit screenings generated during preliminary treatment of domestic sewage in a treatment works.

Water treatment plant sludge is sludge generated during the treatment of either surface water or groundwater for potable use. Neither sewage sludge nor water treatment plant sludge is defined in TCEQ rules as an industrial solid waste. In order to qualify for beneficial land appliction, sewage sludge and water treatment plant sludge must be treated to kill most of the pathogens present.

COMMENT 21

Earlene Youngblood.questions if a water well inventory of shallow and deep water wells in the area and down gradient of the site has been performed.

RESPONSE 21

Yes. The Texas Water Development Board (TWDB) database of water wells and the Texas Commission for Environmental Quality records are searched for registered water wells on the

proposed permit property and within a one mile radius of every permit application reviewed by the Water Quality Assessment Team of the TCEQ.

The review of the TWDB database and the TCEQ records did not identify any recorded water wells located on the Stiles South Ranch. No down-gradient water wells were located in the TWDB or the TCEQ records within a mile from the site. The TCEQ files did have record of a water well report that located a well at the headquarters of the Stiles Ranch that is approximately100 feet west of Farm-to-Market Road 1063 and produces groundwater from 67 feet below ground level (bgl). The TWDB had records for the City of Thrall public supply wells which are located 1 mile west up gradient from the main ranch site and produces from 32 feet bgl.

A site visit was conducted that identified a hand-dug well, a brick liner, and a concrete lid just north from the lowest gate entrance on the southwest corner of the South Stiles proposed application area. The water level was observed at approximately 10 feet below ground level and appears to accumulate water from the Quaternary terrace deposits. Most farm houses in the area appear to have cement collars within 50 feet from the residence, visible from the road, which may indicate hand dug wells. The public meeting also supported that area residences rely on the shallow groundwater.

COMMENT 22

Tony Ray Buzan, Mark Sobotik, and **Sidney Ging** are concerned that there are wells and springs in close proximity to the site and that there are shallow wells less than 20 feet deep. They also have concerns that the wells around the area will be contaminated. **Sarah Chah** and **Ginger Gross** are concerned about the impact the land application site will have on existing shallow and deep wells.

RESPONSE 22

The public meeting revealed additional hand-dug wells outside of the application area that are intended for domestic use. The site visit also noted most farm houses in the area appear to have cement collars within 50 feet from the residence, visible from the road, which may indicate hand dug wells. No city sewer system was noted and the farm houses are believed to rely on septic systems. When a septic tank and subsurface drainpipe are placed in the shallow subsurface and in close contact with the same interval of shallow groundwater, the presumption is made that theses septic systems are not adversely impacting the neighboring shallow groundwater quality.

As a response to the concerns expressed at the public meeting, groundwater monitoring was recommended for both the North and South Stiles sites to identify the existing water quality and any water quality changes after beneficial biosolid application begins. The TWDB water quality records show shallow groundwater from the City of Thrall public supply wells have near-surface impacts to groundwater quality with nitrate concentrations ranging between 27 mg/l - 75 mg/l, which is above the EPA primary drinking water standard of 10 mg/l for nitrate. Groundwater quality from

hand dug wells near the City of Thrall sampled during the 1940's also show near-surface impacts to groundwater quality with nitrate concentrations greater than 50 mg/l.

Spring Branch was visited by the TCEQ in December of 2005 during a dry period. The branch contained water in the banks of the creek. Water was found seeping from a gravely terrace deposit that intersected the scour channel of Spring Branch just east of the shallow lined well.

TCEQ recommended that a monitoring well must be installed near the spring feeding Spring Branch. The shallow groundwater in the monitoring well will be sampled to show pre-sludge application groundwater quality entering the site from the west. Two additional monitor wells will be located at a point before the branch leaves the permitted property and down-gradient from a major portion of the area receiving sludge application. The first sampling event will occur before any sludge is applied to establish a background groundwater quality of the near-surface spring. A surface sampling of water from Spring Branch will be sampled before the branch leaves the property. Additional nutrients found in the surface water associated with the cattle operation and not attributed to sludge application will be identified. Continued groundwater monitoring of the spring area and the two down-gradient wells from the sludge application area and the branch leaving the property will indicate if the beneficial biosolid application contributes to further degradation of the groundwater quality beneath the application site.

COMMENT 23

Earlene Youngblood is concerned if there are oil or gas pipelines and other utilities present on site.

RESPONSE 23

A natural gas pipeline was identified from an onsite visit by the TCEQ in December 2005. The pipeline runs underground and is marked on the east and west fence line as a blue and white striped fence post. The underground pipeline is not expected to be compromised from the permitted sludge application activities.

COMMENT 24

Earlene Youngblood asks if the roads that lead to site flood and what is the impact on the existing drainage.

RESPONSE 24

A Federal Emergency Management Administration (FEMA) map was submitted with the application showing the sludge land application site and the surrounding area within one quarter

mile. All of the site area and surrounding areas are not prone to flooding. Also, a site assessment conducted by the TCEQ Region 11 Office on October 12, 2004, indicated that the site, including the roads that lead into the site are not located in a designated floodway.

COMMENT 25

Earlene Youngblood is concerned with the impact of the proposed site on the watershed in the area.

RESPONSE 25

The draft permit strictly prohibits discharges into water in the state. The draft permit also contains additional safeguards to minimize risks to nearby water sources. As long as the Applicant complies with the draft permit limitations, the watershed in the area is not expected to be affected. If discharges to ground or surface water occur, it will constitute a permit violation and are subject to TCEQ enforcement action.

COMMENT 26

Mike Cmerek, Tony Ray Buzan, and **Sarah Chah** want to know who will police the dumping of sewage waste and what is the TCEQ going to do to protect health and safety.

RESPONSE 26

The TCEQ will routinely monitor this site like any other permitted site. American Water Services Residuals Management, Inc., is responsible for submitting reports on a quarterly and annual basis to both the Central Office and Regional Office in Austin. The reports must include the following:

1. Amounts of sludge land applied
2. The site vegetation used and number of cuttings or grazings
3. The metal concentration, pathogen analysis data, and vector attraction certifications of sludge for each source.
4. A list containing the name and permit number of each source of sludge.
5. The date of delivery of each load of sludge land applied.
6. The date of land application of each load of sludge.
7. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC § 312.43 (b).
8. The suggested agronomic rate for the sludge.

The information listed aboveis provided in computer-generated report format for the quarterly reports and is made available for public viewing on the TCEQ website. Additionally, the TCEQ investigates all complaints received. Therefore, if improper activities are seen, they should be reported immediately to the TCEQ Region 11 Office in Austin for a timely inspection.

COMMENT 27

Cullen Johnson and **Elizabeth Williamson** are concerned with how will the people of Thrall and their neighbors know if a problem occurs and that Williamson County should be well advised to avoid future unknown problems associated with issuing land application permits. **Becky Cmerek** wants to know what number to call to report problems.

RESPONSE 27

The public may report possible violations of the draft permit by contacting the TCEQ Region 11 office or the toll-free environmental hotline listed at the beginning of this Response. Citizen complaints may also be filed on-line. If the facility is found to be out of compliance with the terms or conditions of its permit or of TCEQ regulations, it will be subject to enforcement action.

COMMENT 28

Sarah Chah is concerned about what happens when something goes wrong, and who is going to protect the people if someone gets sick or dies. **Earlene Youngblood** is concerned if there will be adequate water in case of a fire.

RESPONSE 28

It is the responsibility of the operator to plan for and take any emergency precautions necessary at the site and to operate the site in a manner to prevent public health nuisances. If issues do arise, adjacent landowners are recommended to contact the Region 11 office in Austin.

COMMENT 29

Earlene Youngblood is concerned with the effect the site will have and development have on the quality and quantity of the receiving streams and ponds, natural springs, and shallow ground water uses in the area. **Sidney Ging** is concerned about effects on area creeks.

RESPONSE 29

The permit issued for the South Stiles site does not allow any discharge of pollutants from the site. Best management practices and adherence to TCEQ rules will have minimum impact to water in the state. The streams crossing the application areas are buffered from, and exclude, sludge application within 200 feet from the centerline of the streams. One spring was located on the South Stiles site along the north bank of Spring Branch and is included in the 200-foot buffer from application.

COMMENT 30

Earlene Youngblood asks the direction of flow of the groundwater and what effects the proposed site will have on the flow of groundwater.

RESPONSE 30

The regional flow of the groundwater supplying the City of Thrall follows the dip of the gravel deposits, which is generally toward the southeast. Shallower groundwater and spring flow usually follow the surface contour. The application of biosolids does not alter or affect the flow of groundwater. The draft permit was written to have minimum impact to water in the state. The additional buffer areas that exclude sludge application from specific areas will be protective of water in the state. Groundwater monitoring on the South Stiles site will also identify the existing water quality and any changes to the water quality after beneficial biosolid application begins.

COMMENT 31

Earlene Youngblood is concerned if the down gradient geology has been investigated and if the applicant has identified the location of natural springs in the area and she has concerns on the effect the land application site will have on the natural springs in the area. **Mary Carroll** is concerned about natural springs in the area.

RESPONSE 31

The geology and springs located off site were not investigated, because they are on privately owned property and TCEQ does not have the jurisdiction to allow or require applicants to enter property owned by others to gather information. The South Stiles site will adhere to TCEQ rules that protect water in the state. The draft permit for the South Stiles site does not permit any discharge of pollutants from the site and does not allow the transport of biosolid nutrients from the site.

Because of the draft permit and rules, the down-gradient geology and the off site springs should not be adversely impacted from biosolid application on the South Stiles Ranch.

The geology that was investigated pertains to the application of biosolids. A site visit to the South Stiles site was conducted by the TCEQ and identified a spring along the north bank of Spring Branch. This spring is included in the 200-foot buffer from biosolid application along Spring Branch.

COMMENT 32

Earlene Youngblood and **Allen Patschke** ask about the proximity of the site to recharge zones or to the surface or near surface of the aquifer. **Cullen Johnson** and **Elizabeth Williamson** are concerned that the water table is too close to the surface.

RESPONSE 32

Recharge to shallow groundwater occurs throughout the region. The recharge mechanism controlling the majority of hand dug domestic wells in the area is from regional capillary migration of water expelled from saturated soils. The expelled water then migrates to more permeable silt, sand, or gravel beds. The gravel beds are laterally discontinuous but, when extensive, may crop out at the surface and transmit surface water to the subsurface. The proposed land application areas were cultivated in the past and this has disturbed any silt, sand, or gravel beds that may have been exposed at the surface.

COMMENT 33

Group 2 and **Steve Clark** are concerned about the effects the land application site would have on drinking water. **Steve Clark** is concerned that hospital waste and low level radioactive waste can get into the drinking water and cause disease.

RESPONSE 33

The draft permit strictly prohibits any discharge of pollutants into water in the state that would contaminate drinking water. The draft permit also contains additional safeguards to minimize risks to nearby water sources. As long as the Applicant complies with the draft permit limitations, drinking water in the area will be protected.

Hospital waste and low level radioactive waste are not allowed to be disposed of into the municipal waste water treatment plants providing biosolids to the South Stiles Ranch.

COMMENT 34

Steve Clark and Lawrence Brown are concerned that the City of Austin uses different sewer pipes in the street for industrial sewage and others for household wastes.

RESPONSE 34

The City of Austin uses the same sewer pipes for both industrial and domestic wastewater discharges into their collection system. Any industrial wastewater that enters the sewer pipes that lead to the City of Austin wastewater treatment plant is required to comply with the City of Austin's pretreatment permit requirements. The City of Austin has a Texas Pollutant Discharge Elimination System pretreatment program, which is approved by the TCEQ, to regulate industrial wastewater discharges into their sewer collection system. As part of this approved pretreatment program, the City of Austin has developed local discharge limits to control wastewater discharges into the sewer system from industrial users. The City of Austin is also required to issue permits, inspect, and sample wastewater discharges from industrial users. In order to meet the permit requirements and local discharge limits, industrial users install wastewater treatment systems to pretreat their wastewater prior to discharge into the sewer system leading to the City of Austin's wastewater treatment plant.

COMMENT 35

Sarah Chah, Lawrence Brown, and Gordon Druesdow are concerned if the site operator is going to do air sampling and, if not, it needs to be in the permit.

RESPONSE 35

TCEQ rules and regulations do not require sludge beneficial land application sites to conduct air sampling.

COMMENT 36

Earlene Youngblood is concerned that people in the area were not allowed to comment on the impacted area. Mark Sobotik, Hope Ging, and Jason Faulkner are concerned that adjacent landowners were not identified in the application.

RESPONSE 36

TCEQ rules require that notice must be provided to all owners of properties adjacent to any portion of the total tract of land where the permitted activities will occur. In this case, the Applicant submitted a map indicating all the adjacent landowners. These landowners were included on the mailing list and were mailed notice of the application. In addition, notice is required to be published in a newspaper with the largest circulation in the county where the project is located. The first notice that was mailed and published was the Notice of Receipt and Intent to Obtain a Sludge Permit, which was prepared after completion of the administrative review of the application and declaration of administrative completeness. The second notice that was mailed and published was the Notice of Application and Preliminary Decision, which was prepared after the draft permit had been completed. Both of these notices were mailed to all people on the mailing list, which included all adjacent landowners identified by the applicant.

Anyone who, at the time the application was submitted, owned land bordering the perimeter of the tract of land on which the permitted activities will occur who did not receive mailed notice from the Commission should contact the Chief Clerk immediately. The Applicant may be required to resend and republish the notice if the notice procedures were not followed properly.

COMMENT 37

Jeffery Overmier questions how proper biosolid application techniques and methods are verified.

RESPONSE 37

The TCEQ has established management requirements, in accordance with its rules to protect against surface and groundwater contamination, and these are incorporated into the draft permit. The operator is required to apply treated sludge uniformly over the surface of the land and under conditions that prevent runoff of sludge beyond the active application area and protect the quality of the surface water and the soils in the unsaturated zone. The operator is prohibited from applying sludge during rainstorms or during periods in which surface soils are water-saturated. The draft permit requires the operator to cease further application if sludge runoff from the active application area is evident until the condition is corrected.

COMMENT 38

Joanne Buzan is concerned whether the Applicant will be paying fees to a general revenue fund and if any guarantees have been made concerning proper values or fees. Mark Sobotik and Hope Ging are concerned about the fees to be paid. Becky Milholland is concerned that the TCEQ is supported by fees from permit applications.

RESPONSE 38

Holders of TCEQ sludge permits are assessed an annual fee that is determined by the weight of solids beneficially used and reported to the TCEQ as of September 30 of each year. Failure to report does not exempt a permittee from this fee. Documentation of the weight used to calculate the annual fee can be checked against the required documentation every permittee must keep and maintain on each load of sludge delivered to a site.

The minimum fee assessed against each permit is $100, regardless whether the site is active or inactive. Otherwise, the fee is $0.75 per dry ton if the sludge is applied to agricultural land for beneficial use. If the sewage sludge is disposed of in any other manner, such as at authorized disposal sites where there is no beneficial agricultural use, then the fee is $1.25 per dry ton. The Commission has set these fees by rule with public input. The public policy preference inherently incorporated into the level of these fees is to beneficially use and recycle the nutrients in sludge rather than dispose of the sludge by any other means, in particular, to avoid disposing of sewage sludge into landfills, thus extending the workable lifetime of existing landfills for the disposal of other kinds of solid waste.

The annual fee for sludge permits is divided into two funds: one fund is dedicated to TCEQ operations (along with all or part of other fees assessed by the TCEQ) that pays for the cost of TCEQ's review of applications, enforcement of its rules, and general agency administrative operating costs; the second fund (along with part of the annual municipal solid waste fee) is dedicated by the Texas Legislature to the operation of the various councils of governments established throughout the state.

TCEQ assesses fees for all waste media in the state and for processing permits and other operations in an effort to cover the agency's operating costs without any supplemental appropriation from the state general fund. As with any organization, some years income exceeds expenses, other years expenses exceed income. Nevertheless, fees assessed by the TCEQ are public money, and the Legislature reviews and approves TCEQ's budget, including income and expenses, every legislative biennium.

In response to public comment, the Executive Director made the following changes to the draft permit:

The land application area was reduced from 340.62 acres to 232.62 acres due to the addition of necessary various buffer zones that were identified to staff during the public meeting and public comment period. The buffered areas were inspected during a site assessment by the TCEQ staff on December 6, 2005.

Respectfully submitted,

Texas Commission on Environmental Quality

Glenn Shankle
Executive Director

Robert Martinez, Director
Environmental Law Division

By
John E. Williams, Staff Attorney
Environmental Law Division
State Bar No. 24004991
P.O. Box 13087, MC 173
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512-239-0455
Representing the Executive Director of the Texas Commission on Environmental Quality

CERTIFICATE OF SERVICE

I certify that on October 2, 2006, the "Executive Director's Response to Public Comment" for Permit No. WQ0004745000 was filed with the Texas Commission on Environmental Quality's Office of the Chief Clerk.

John E. Williams, Staff Attorney
Environmental Law Division
State Bar No. 24004991

Proposed New TCEQ Permit No. WQ0004746000

Application by AMERICAN WATER SERVICES RESIDUAL MANAGEMENT, INC., for TCEQ Permit No. WQ0004746000	§ § § §	Before the TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment (Response) on the application by American Water Services Residual Management, Inc. (Applicant), for a new TCEQ Permit Number WQ0004746000 and on the Executive Director's preliminary decision on the application. As required by Title 30 of the Texas Administrative Code, Section 55.156, before a permit is issued, the Executive Director prepares a response to all timely, relevant and material, or significant, comments. The Office of Chief Clerk timely received comment letters and comments at the public meeting. The following people sent in identical comment letters and will be known as **Group 1**:

Beverly Aikens,
Dianne Ake,
Jeff Ake,
Jeanie Alderete,
Dorothy Anderson,
Jan Armentrout,
Charles Aultshroder,
Carrol Bachmayer,
Gene Baird,
Russel Balusek,
Sharon Betak,
Lou Biar,
Franki Blanks,
Glenda Bohac,
Johnnie Bohac,
Jerry Bounds,
Keith Bower,
Jean Brian,
Lucille Brinkmeyer,
Arleen Brosch,
Elaine Brown,
Lawrence Brown,
Betty Bullin,
Don Bunner,
Tamara Bunner,
W. R. Burns,
Jack Burton,
Lajuana Burton,
Newton Butts,
Joanne Buzan,
Tony Ray Buzan,
Hugh Caffey, Jr.,
Richard Carillo,
Roy Carillo,
Billy Carlson,
Doris Carlson,
Ed Carlson,
Craig Carothers,
Phyllis Carothers,
L'Tisha Carpenter,
Irene Cast,
Melvin Cast,
Antonio Castro,
Dwaine Cervenka,
Charles Clark,
Deborah Clark,
H. Clark,
Jeannette Clark,

Ruth Clark,
Steve Clark,
David Clawson,
Becky Cmerek,
Mike Cmerek,
Cheryl Collins,
Elizabeth Copple,
John Paul Crouch,
Betty Ann Cruz,
Tommy Cruz,
Donna Cryer,
Barbara Dale,
Allen Darr,
Catherine Hodges Darr,
Connie Davenport,
Gordon Druesow,
Patricia Dumbeck,
Marie Dunkle,
Vernell Dvorak,
Carolyn Eiben,
David Evans,
Frank Felton,
Marcia Felton,
Brian Fikae,
Nicole Filz,
Bethany Fisher,
Jennifer Fisher,
Jon Fisher,
David Fussel,
Joyce Fuller,
Dennis Gage,
Ernestine Gage,
Rebecca Garcia,
W. P. Garrett,
Pam Gender,
Bobby Ging,
Debbie Ging,
Dorothy Ging,
Gilbert Ging,
Hope Ging,
Peggy Ging,
Sidney Ging,
Tracie Ging,
Eric Glen Garcia,
Diane Gomez,
Janie Gomez,
Martin Gonzalez,
Barbara Gordel,
Janiece Grimes,
Leonard Grimes,
Linda Grimm,
Brian Gross,
Brianna Gross,
Ginger Gross,
Bonner Hardegree,
Suzanne Hardegree,
Herman Harris,
Majorie Harris,
Randy Hehmann,
Diana Hejl,
Floyd Hejl,
Juanita Hejl,
Mary Helen Henderson,
Eldon Hengst,
Mary Hengst,
Mimzie Herklotz,
Santiago Hernandez,
Santos Hernandez,
Lisa Heselmeyer,
Henry Hoffenek,
Jennifer Hoffman,
Malcom Holder,
Betty Hubbard,
Melody Huber,
Dianna Huff,
Louis Huff,
William Humphrey,
Dena Jaeger,
Mark Jaeger,
Karol Jarmon,
Rosalie Jechow,
Jose Jimenez,
James Jirasek,
Leann Johnson,
Anita Jones,
Caroline Jones,
Lonnie Jones,
Barbara Kelm,

Benice Kelm,
Harvey Kelm,
Johnny Kelm,
Horace Kemmert,
Yvonne Kemnitz,
Helen Kerlin,
Kelby Kerlin,
Doris Kosik,
Donald Kunze,
James Lantzsch,
James Lantzsch, Jr.,
Todd Lantzsch,
Larry Lashley,
Michael Latouf,
Jack Lee,
Jack Lee, Jr.,
A. J. Lehman,
Arthur Lehmann,
Rudy Leyendecker,
Elroy Lieberum,
Emma Lillis,
Sarah Lincoln,
Isabelle Locklin,
April Lucio,
E. Lucio,
Marcelino Lucio,
Avis Lukas,
Evelyn Mann,
Fred Mares,
Kathy Mares,
Paul Martin,
Yvette Martinez,
Sherry Marx,
Troy Marx,
Eva McKendrick,
Gene McKendrick,
Melissa Meaker,
Peggy Meaker,
Robert Meaker,
Cedro Mendez,
Jilberto Mendez, Jr.,
Courtney Michna,
Luane Michna,
Dennis Mikulencak,
Carl Moehnke,
Douglas Moehnke,
Joy Moehnke,
Paul Moerbe, Jr.,
Joe Moldenhour,
Ray Moore,
Dawn Morton,
John Morton,
Misty Morton,
Paul Brian Morton,
Corey Moss,
David Mucha,
Arline Muegge,
Kristine Nelson,
Jauanna Newman,
Anthony Niemtschk,
Charles Nipps,
Glenn Noble,
Sharon Noble,
Norma Olvera,
Leonard Ortez,
Bonnie Ortiz,
Jennifer Osbourne,
Matthew Overmier,
Allen Patschke,
Donna Patschke,
Nolan Patschke,
Viola Patschke,
Joseph Pausewana,
Sheila Pausewang,
Tandie Payne,
Edward Pierritz,
Frances Pierritz,
Virdie Pircher,
Richard Pitts,
Connie Poe,
Dusty Pope,
Lynda Raffel,
Cyndy Raiford,
James Raiford,
Jason Ramirez,
John Ramirez,
Omelda Ramirez,
Thomas Ramirez,

Carolyn Remmert,
Christine Renteria,
Ray Renteria,
Daniel Rice,
Carl Rider,
Jennifer Rider,
Shari Rider,
Beatrice Roberson,
Marvin Rodenbeck,
Norma Rodriquez,
Robert Rodriquez, Jr.,
Shirley Roepke,
Evelyn Rohlack,
Lucille Rosenthal,
Edward Roznovak,
Helen Roznovak,
Larry Safarik,
Paula Safarik,
H. L. Sakewitz,
Tommie Schiller,
Lornie Schneider,
Melinda Schneider,
Georgia Schrader,
Jesse Schrader,
Gus Schramm,
Gus Schramm III,
Randall Schramm,
Danny Schroder,
Adele Schwettman,
Doris Schwettman,
Melvin Schwettman,
Bernice Sciortino,
D. R. Sciortino,
Valerie Senior,
Michael Sharp,
Viola Shiller,
Dorothy Skrhak,
Caroline Sladek,
Eugene Sladek,
Harvey Sladek,
Larry Sladek,
Pat Smith,
Tracy Smith,
Tracy Spence,
Alice Stojanik,
Connie Stojanik,
Robert Stojanik,
Diane Stolle,
Justin Stolle,
Clay Suarez,
Douglas Swenson,
Mary Thomas,
Phyllis Tipton,
Richard Tipton,
Kimberly Todd,
Clifford Tomancak,
Dodi Tomancak,
Rick Tooley,
Lori Towery,
Salina Towery,
Harvey Townsend,
Cynthia Tschantz,
Gary Ubanek,
Manuel Vargas,
Rose Marie Vargas,
Hilda Vasquez,
Joe Vasquez,
Rita Vasquez,
Janet Vitek,
Beth Walker,
Jeff Walker,
Maggie Walker,
Tim Walker,
Sandy Warner,
Carl Washington,
Dora Washington,
Donald Watson,
Phillip Webster,
John Paul Wernecke,
Mrs. John Wernecke,
Cindy Widner,
Julius Widner,
Kevin Widner,
Sue Widner,
Lille Wieringa,
Edward Williams,
Nicole Williams,
Jenny Williamson,

Carolyn Wuensche,
Alan Wuthrich,
David Wuthrich,
James Wuthrich,
Rose Wuthrich,
Robert Yunk, and
Mildred Zamorsky.

The following people sent in identical comment letters and will be known as **Group 2**:

Dorothy Anderson,
Gene Ash,
Karen Ash,
Alberto Banda,
Evelyn Bauerschlag,
Frankie Blanco,
Sherry Boothe,
Jean Brian,
Freeda Brooks,
Rick Broz,
Kelly Brymer,
Betty Bullin,
Don Bunner,
Tamara Bunner,
Jack Bunton,
Lynne Cardenas,
Crystal Carpenter,
David Carpenter,
Antonio Castro,
Josephine Castro,
Karen Chandler,
Richard Chandler,
Charles Clark,
Deborah Clark,
Jeanette Clark,
Ruth Clark,
Wendy Coffs,
Donna Cryer,
Darlene Dodson,
Marlene Drummond,
Delan Dukes,
Mari Dunkle,
Sabrina Dunkle,
Danny Dunn,
James Dvorak,
Vernell Dvorak,
Mark Ely,
D. Evans,
Liz Ford,
Pamela Ford,
Cyndee Fowler,
Louis Francis,
Bill Garrett,
Andersen Gasten,
Hope Ging,
Benito Gomez,
Diane Gomez,
Frankie Gomez,
Beatrice Gonzales,
Janie Gonzales,
Martin Gonzales,
Patricia Haining,
Bruce Hall,
Donna Hall,
James Hendrix,
D. Hill,
N. Hill,
Nancy Hill,
Sue Hinojosa,
Skip Hobbs,
Sharon Hobbs-Moon,
Clayton Holder,
Malcom Holder,
Jose Jimenez,
Brian Johle,
Penny Johle,
Leann Johnson,
James Kemnitz,
Yvonne Kemnitz,
Tracy Kerzee,
Vernon King,
Vanna Kirk,
Bonnie Krueger,
Donald Kunze,

Clay Laake,
Isabelle Locklin,
April Lucio,
Eva Lucio,
Marcelino Lucio,
Marcelino Lucio III,
Jose Madrigal,
Evelyn Mann,
Joyce McCown,
Michael McCoy,
Erica McDaniel,
M. McNay,
Peggy Meaker,
Cindy Melcher,
Julia Mendez,
Pete Mendy,
M. Moerbe,
V. Moerbe,
Cecilia Montoya,
Paul Morley,
Sharon Morris,
John Morton,
Misty Morton,
Clyde Newman,
Jauanna Newman,
Anthony Niemtschk,
Steve Noble,
Socorro Ortega,
Aurora Ortiz,
Katherine Page,
Johnie Palano,
Junaita Paldrach,
Ronnie Pam,
Emile Parnell,
Todd Paterson,
Charlene Patschke,
Estella Perez,
Daniel Pitts,
Joe Price,
W. F. Puckett,
Colleen Qualls,
Doris Quintero,
Celestino Ramirez,
Jason Ramirez,
Penny Rennanocker,
Beatrice Roberson,
Norma Rodriquez,
Doris Rohlack,
Amy Scheffel,
Gus Schramm,
Joey Schillings,
Bud Smith,
Pat Smith,
Selena Stanford,
Cheryl Stiles,
Alice Stojanek,
Connie Stojanek,
M. Taylor,
Coy Tillotson,
Phyllis Tipton,
Cindy Tooley,
Salina Towery,
Charles Urbanek,
Richard Valadez,
Wendy Valadez,
Carrie Vallie,
Vera Vizena,
Herman Wells,
Alfred Wernli,
Jenny Williamson,
E. B. Wilson,
Elida Yanez,
James Young,
Lee Young,
Amanda Youngblood, and
Earlene Youngblood.

The following people sent in individual comment letters, added individual comments on a form letter, or spoke at the public meetings:

Lawrence Brown,
JoAnne Buzan,
Tony Ray Buzan,
Antonio Carrillo,

Mary Carroll,
Sarah Chah,
Steve Clark,
Willard L. Click,
Becky Cmerek,
Mike Cmerek,
Gordon Druesdow,
Dan Engelhardt,
Jason Faulkner,
Hope Ging,
Peggy Ging,
Sidney Ging,
Ginger Gross,
Randy Hehmann,
Cullen Johnson,
Morris Krueger,
Representative Mike Krusee,
Raymond Lenz,
Clemente and Paula Martinez,
Terry Mendez,
Becky Milholland,
Jeff Overmier,
Allen G. Patschke,
Connie Poe,
Ray Rentería,
Amy Schiffel,
Chris Schiffel,
Mark Sobotik,
Elizabeth Williamson, and
Earlene Youngblood.

This Response addresses all comments received, whether or not withdrawn. If you need more information about this permit application or the wastewater permitting process, please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.state.tx.us.

BACKGROUND

Description of Facility

American Water Services Residuals Management, Inc., has applied to the TCEQ for a new permit that would authorize the beneficial application of wastewater treatment plant sewage sludge and drinking water treatment plant sludge to agricultural land at an annual rate not to exceed 7.4 dry tons per acre per year on 285.41 acres of agricultural land with a site of approximately 361.93 acres. The facility will be located approximately two miles northeast of Thrall, 1.5 miles north of the intersection of U.S. Highway 79 and Farm-to-Market Road 1063, ½ mile east of the intersection of County Road 430 and Farm-to-Market Road 1063 in Williamson County, Texas

Procedural Background

The application was received on July 7, 2004, and declared administratively complete on August 31, 2004. Notice of Receipt of Application and Intent to Obtain a Beneficial Land Use Permit (NORI) was published September 7, 2004, in the *Taylor Daily Press*. The TCEQ Executive Director completed the technical review of the application on May 27, 2005, and prepared a draft permit. Notice of Application and Preliminary Decision and Notice of Public Meeting for Beneficial Land Use Permits (NAPD) was published August 2, 2005, in the *Taylor Daily Press*. A public meeting was held on September 1, 2005, in Thrall, Texas, and the comment period closed at the conclusion of that public meeting. This application was administratively complete on or after

September 1, 1999; therefore, this application is subject to the procedural requirements adopted pursuant to House Bill 801 (76th Legislature, 1999).

Access to Rules, Laws and Records

Secretary of State website for all administrative rules: www.sos.state.tx.us
TCEQ rules in Title 30 of the Texas Administrative Code: www.sos.state.tx.us/tac/ (select "TAC Viewer" on the right, then "Title 30 Environmental Quality")
Texas statutes: www.capitol.state.tx.us/statutes/statutes.html
TCEQ website: www.tceq.state.tx.us (for downloadable rules in WordPerfect or Adobe PDF formats, select "Rules, Policy, & Legislation," then "Rules and Rulemaking," then "Download TCEQ Rules")
Federal rules in Title 40 of the Code of Federal Regulations: www.epa.gov/epahome/cfr40.htm
Federal environmental laws: www.epa.gov/epahome/laws.htm

Commission records for this facility are available for viewing and copying and are located at TCEQ's main office in Austin, 12100 Park 35 Circle, Building F, 1st Floor (Office of Chief Clerk, for the current application until final action is taken), and at TCEQ's Region 11 Office in Austin at 1921 Cedar Bend Drive, Suite A150. The application for this facility has been available for viewing and copying at the City of Taylor Public Library, 400 Porter, Taylor, Texas, since publication of the NORI and the application draft permit, statement of basis/technical summary, and Executive Director's preliminary decision have been available for viewing and copying at the same location since publication of the NAPD.

COMMENTS and RESPONSES

COMMENT 1

Mike Cmerek questions whose sludge is being dumped and how will the sewage be applied.

RESPONSE 1

The sludge sources are the City of Austin Hornsby Bend Wastewater Treatment Plant and the City of Houston Southeast Water Treatment Plant. The sludge will be land-applied with calibrated industrial grade manure spreaders and will be incorporated with a disk.

COMMENT 2

Jeffery Overmier, Tony Ray Buzan, and **Morris Krueger** question the proposed application rate and how long the sewage sludge will lay on top of the soil.

RESPONSE 2

The application rate at this site is 7.4 dry tons of sludge per acre per year. Under TCEQ rules, the staging of sewage sludge at a land application site may occur for a maximum of seven days. Non-compliance with this rule would result in a violation of the permit.

Incorporation of sludge into the soil is the Applicant's option and depends on the crop to be grown by the owner of the land where the application occurs. Where there is an established, year-round crop, such as grass grown for hay, incorporation may cause damage to the crop. Nevertheless, the established crop helps minimize erosion. Where seasonal crops are to be grown, discing the sludge into the soil between successive plantings is a practical option, and TCEQ's rules require incorporation within 48 hours of application or different buffer zone requirements are triggered.

COMMENT 3

Group 1 has concerns that the Applicant may be dumping tens of thousands of sewage a year on a portion of land located near the City of Thrall. **Mark Sobotik** is concerned about the total tonnage to be applied.

RESPONSE 3

The Applicant asked to land apply 3,177 dry tons of wastewater treatment plant sludge each year. TCEQ evaluates the request by looking at the characteristics of the different soil types in the application fields and the capacity of the different soil types to process nutrients and critical metals and make them available for plant growth. The amount of sludge allowed to be applied to the fields under the draft permit is based on the most limiting nutrient or metal factor in the soils for each field. Ultimately, the draft permit for the North Stiles fields authorizes the application of only 7.4 dry tons per acre on 285.41 acres, or only about 2,112 dry tons per year total, about 66% of what was requested.

COMMENT 4

Earlene Youngblood questions whether buffer zone vegetation will be provided around the site. **Mike Cmerek** is concerned if the applicant is going to install ditches and trenches at the site.

RESPONSE 4

No ditches or trenches are proposed for the North Stiles site. TCEQ rules provide for a 50-foot buffer between areas where biosolids are applied and the property boundary. Natural vegetation should be left in the buffer zone.

COMMENT 5

Mike Cmerek and **Tony Ray Buzan** want to know the compliance record of the company and other satellite companies (that operate under different names) and how many violations are on record if there are any. **Ginger Gross** is concerned about an average rating.

RESPONSE 5

The permit was reviewed in accordance with TCEQ's rules on compliance history. The compliance history is reviewed for the company and site beginning five years prior to the date the permit was received by the Executive Director until the present day. The compliance history includes compliance-related components involving all waste media about the site under review. These components include the following (if there are any): enforcement orders, consent decrees, court judgements, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audit and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs and early compliance.

This company and site have each been rated and classified in accordance with TCEQ rules. A company and a site may have one of the following classifications and ratings:

High: rating <0.10 (above-average compliance record)
Average by Default: rating = 3.01 (this category is for new sites that have never operated)
Average: 0.10<rating<45 (generally complies with environmental regualtions)
Poor: 45> rating (performs below average)

This site has a rating of 3.01 and a classification of average by default. The company rating and classification, which is the average of the ratings for all sites the company owns, is 1.69 and average.

COMMENT 6

Mike Cmerek wants to know how long the operator has been doing this, and if the operators have experience with this type of facility, and if the operators' expertise can be evaluated if new to this type of operation.

RESPONSE 6

The TCEQ does not take into consideration the experience level of a site operator when reviewing an application. However, as stated above, the compliance history of both the site and the company are taken into account. A record of the operator's compliance history and correspondence can be found by viewing the compliance history file located at the TCEQ Central Records Office in Austin, or on the TCEQ website at: http://www.tceq.state.tx.us/compliance/enforcement/history/index.html.

COMMENT 7

Group 2, Joanne Buzan, Earlene Youngblood, Amy and Chris Schiffel, and **Sidney Ging** are concerned that metals, pathogens, viruses, and bacteria contained in the sludge that will be applied may be hazardous and cause negative health effects to both humans and animals. **Joanne Buzan** is concerned that the quality of living will be jeopardized. **Group 1, Sarah Chah,** and **Hope Ging** are concerned that children are more exposed to environmental threats and are more susceptible to environmental disease than adults, and that the area will be contaminated with elements that may cause serious illness and maybe even death. **Group 1** and **Connie Poe** believe that there is anecdotal and scientific evidence regarding serious health issues that occur near so-called sludge farms and has concerns and criticism toward the EPA's research by the scientific and political community. **Sarah Chah** has concern that there is no beneficial use for this type of operation in Thrall, Texas. **Joanne Buzan** expressed concern with the problems of asthma in children on the rise and how it relates to airborne pathogens and warm moist air. **Ray Rentería** is concerned that there are practices that are considered dangerous today that were once considered safe. **Morris Krueger** and **Lawrence Brown** are concerned about their families' health. **Gordon Druesdow, Raymond Lenz,** and **Dan Engelhardt** are concerned about airborne pathogens and nearby schools. **Randy Hehmann** is concerned about medical personnel responding to a medical emergency at the property.

RESPONSE 7

The USEPA and TCEQ initiated and approved the practice of land-applying sludge as an acceptable method of recycling. By establishing rules and regulations on land application and fertilization, sludge is kept from contributing to the overgrowth of landfills and the possible increase of utility costs in certain residential areas. Also, the beneficial use of sludge is a useful and economic method to fertilize land for adequate crop growth and is commonly used throughout the nation for activities such as grazing or hay production.

The permit requires monitoring of sewage sludge for heavy metals, pathogens, and other contaminates. There is lab analysis for total metals and pathogens. The extraction and analysis covers other contaminates that may be present. Only sludge meeting set criteria for these contaminates can be used. The US Environmental Protection Agency (USEPA) conducted a risk

assessment when promulgating the regulations. This assessment identified materials of concern and the thresholds below which problems would not exist.

The Applicant must comply with detailed management practices designed to protect human health and the environment. This includes record-keeping requirements and monitoring requirements in TCEQ rules. The draft permit provides that the Applicant must monitor the sewage sludge for ten metals (arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc) as well as reduce pathogens and vector attraction below levels required by TCEQ rules. The draft permit and TCEQ rules require the Applicant to record this information about the sludge that is applied, the number of acres to which sludge is applied, and a description of how the management practices for controlling these pollutants are being met. Periodic site inspections conducted by staff from TCEQ's field offices determine whether these requirements are being met. TCEQ also requires the Applicant to submit quarterly and annual reports that aid in monitoring compliance with specific conditions outlined under TCEQ's rules. Quarterly reports for active facilities are available for viewing at: http://www.tceq.state.tx.us/permitting/water_quality/wastewater/sludge/WQ_sludge_reporting.html. If members of the public identify harmful or unsafe conditions from the facility, the public may contact TCEQ's Region 11 office in Austin at 512-339-2929 or toll-free at 1-888-777-3186. Calls from Williamson County are automatically routed to the Region 11 Office for response Citizen complaints may also be filed on-line at http://www.tceq.state.tx.us/cgi-bin/enforcement/complaints.

Under TCEQ rules, public access to land with a high potential for exposure must be restricted for at least one year after application of sewage sludge. Public access to land with a low potential for exposure must be restricted for at least 30 days after application of the sewage sludge.

COMMENT 8

Tony Ray Buzan questions why the dumping of sewage wastewater or sludge waste into the oceans and was stopped.

RESPONSE 8

The Ocean Dumping Ban Act of 1988, which prohibited all municipal sewage sludge and industrial waste dumping into the ocean after December 31, 1991, was enacted to require the establishment of long-term, land-based disposal alternatives. The Act continues to encourage solutions that have beneficial uses, such as fertilizing crops, instead of disposal methods, such as filling up landfills.

The land application of sewage sludge in this case is for beneficial use by the placement of sludge onto land in a manner that complies with the requirements of state and federal regulations, and does not exceed agronomic needs for a cover crop or any metal or toxic limitations that the cover crop may have.

COMMENT 9

Cullen Johnson and **Elizabeth Williamson** are concerned that, upon examination of the data for areas that have had an application of wastewater treatment plant sludge, there was no established baseline for heavy metals, and it hasn't been established as to whether there is an increase in heavy metals due to application or that heavy metals were present prior to application of the sludge. **Willard Click** is concerned about baseline measurement of metals in the soil.

RESPONSE 9

The Applicant has not previously land-applied sludge at this site. The application requires the Applicant to submit soil samples prior to any land application of any sludge or commercial fertilizer at the site. The samples taken at the site were submitted to a soil testing laboratory and performed according to the methods outlined in TCEQ and EPA guidelines. The samples results showed that the soils met the acceptable soil concentration limits for metals, which are based on the maximum cumulative loading rates found in TCEQ rules.

COMMENT 10

Sarah Chah questions if the operator is going to test each truck load for toxins.

RESPONSE 10

Each individual truck load of sludge that goes to the land application site is not tested. It is the responsibility of the City of Austin and the City of Houston to certify that the sludge generated and used for land application meets the metal ceiling concentrations stated in TCEQ rules. Also, no sludge failing a toxicity characteristic leaching procedure (TCLP) can be taken to any beneficial use site to be land applied. A TCLP analysis is used to determine whether the sludge is deemed hazardous or non-hazardous waste.

It is the responsibility of the Applicant to maintain a record of each individual collection from the two cities and the amount of sludge land-applied in the form of a trip ticket for each load. Copies must be retained and readily available for review by the TCEQ for at least five years.

COMMENT 11

Mike Cmerek, **Earlene Youngblood**, and **Mary Carroll** question the road maintenance and how litter and mud will be controlled on the road. **Joanne Buzan** has concerns that traffic will be greater and that roads and bridges may not be designed to handle heavy machinery and trucks on a constant and frequent basis.

RESPONSE 11

The TCEQ does not have jurisdiction over traffic or roads. On the issue of traffic, it is commonly assumed in comments that there will be more truck traffic than is generally the case. The number of loads will depend on how much water is in the material that is applied and the size of trucks used. The Applicant might not apply evenly throughout the year, so there could be considerably more loads on some days and none for weeks or months thereafter. There can be dust problems from vehicles on dirt roads, but it is unlikely that the vehicles servicing this site will cause any more problem than the traffic in that area. If problems occur on county roads, the county is responsible for taking action. If they occur on the site, the Applicant must take action to control the dust. The requirements for these actions are covered in TCEQ rules. Noise from vehicles is covered under traffic laws of the state and local ordinances, which are not under the TCEQ's jurisdiction.

Application of sludge is prohibited during rainstorms or during periods in which surface soils are water-saturated. Therefore mud from the wheels of application vehicles on roads and highways should not be a problem.

COMMENT 12

Earlene Youngblood wants to know how long the drivers have been doing this and what type of traffic flow pattern has been set.

RESPONSE 12

The TCEQ does not consider the operator or transporter experience level when reviewing a sludge beneficial-use application. However, as stated above, the permit was reviewed in accordance with TCEQ's compliance history rules. A compliance history is reviewed for the company (which would include the drivers hauling the sludge) and site for the period beginning five years prior to the date the permit was received by the Executive Director.

An applicant is not required to submit the route or a traffic flow pattern from which the sludge will be transported. It is the responsibility of each registered hauler to practice best management practices when transporting the sludge from the facility to the land application site.

COMMENT 13

Joanne Buzan questions what the economic effects will be on the community, what financial assurances have been made to ensure problems can be handled now, and when and if there ever is a closure. **Group 2, Becky Cmerek, Mike Cmerek, Amy and Chris Schiffel,** and **Joanne and Tony Ray Buzan** have concerns that there will be negative effects on property values, and wonder who is going to be responsible for the loss of these property values, wages and health expenses, and if there are any guarantees that have been made concerning property value **Cullen Johnson** and

Elizabeth Williamson are concerned that the land application site area is located too close to the City of Thrall and a number of small farms and residences. **Cullen Johnson** and **Elizabeth Williamson** also have concerns that the application of wastewater treatment plant sludge will result in a current tenant moving and the possibility of future rentals in question, and that the current tenant will move if application takes place. **Ray Rentería, Hope Ging, Sidney Ging, Allen Patschke, Peggy Ging, Willard Click,** and **Jason Faulkner** are concerned about depreciation of property values on adjacent land.

RESPONSE 13

The TCEQ is tasked by the Texas Legislature with protecting the quality surface and ground water in the state. The TCEQ does not have jurisdiction under the Texas Water Code or its regulations to consider property values, the marketability of adjacent property, or economic development in its determination of whether to issue a water quality permit.

On a regular basis, land application permits are issued for five years. The TCEQ grants the permittee the opportunity to apply for a renewal of the permit. There are no limits to the number of times a permitted site can be renewed. However, each time (every five years) a permit application is submitted for a renewal, the application review process follows the same steps as a new permit application. TCEQ rules do not require the site operator to submit a closure plan or report when a land application permit expires. TCEQ rules do not restrict the Applicant's choice of a land application site. However, the Applicant must operate in a manner to prevent nuisances, such as preventing sludge debris from blowing or running off site boundaries or into surface waters, and the Applicant must minimize objectionable odors by taking action such as incorporating the sludge into the soil. TCEQ rules also require a 750-foot buffer zone between the proposed land application field within the site and established schools, institutions, businesses or residences. In addition, TCEQ rules require a 50-foot buffer zone from the property boundaries and a 200-foot buffer zone from all surface waters if the sludge is not incorporated into the soil.

COMMENT 14

Earlene Youngblood questions if the applicant provided a cost / benefit analysis and that the applicant should consider the amount of money spent developing and maintaining the proposed technology and if it is in the best interest for the public.

RESPONSE 14

TCEQ rules do not require the Applicant to provide a cost/benefit analysis when submitting an application. It is the Applicant's responsibility to determine the types of technology that will be used at the site and the economic effects relating to the development and maintenance that the operation will have on the company.

COMMENT 15

Group 2, Steve Clark, Joanne Buzan, Tony Ray Buzan, and **Sidney Ging** are concerned about the odor of sewage and whether or not there will be any monitors set up to measure the odor emitted by the sewage sludge waste. **Cullen Johnson** and **Elizabeth Williamson** are concerned that, although all applications are plowed in to cut down on air pollution, the time of application allows for air pollution to happen. **Allen Patschke, Ginger Gross, Peggy Ging,** and **Antonio Carrillo** are concerned about odor.

RESPONSE 15

TCEQ has established management requirements to control odor and air pollutants at land application sites. The draft permit incorporates these requirements. The draft permit does not allow the operator to maintain or create any nuisance conditions at the land application site. The operator must operate the proposed land application site in a manner to prevent public health nuisances. The operator must prevent sludge debris from blowing or running off site boundaries or into surface waters. The operator must minimize dust migration from the site and from access roadways and must minimize objectionable odors through incorporation of sludge into the soil within 48 hours or by taking other corrective action. The draft permit also includes buffer restrictions that do not allow a land application area to be located closer than 750 feet to a business or occupied residential structure or closer than 50 feet to a public right-of-way or property boundary. The management restrictions and buffer zone setbacks were established to minimize any off-site odor problems.

The public may report possible violations of the draft permit or regulations, including nuisance odor violations, of a facility in Williamson County by contacting the TCEQ Region 11 office in Austin at 512-339-2929, or the statewide toll-free number at 1-888-777-3186. Calls to the statewide toll-free number from Williamson County are automatically routed to the Austin regional office. Citizen complaints may also be filed on-line at http://www.tnrcc.state.tx.us/cgi-bin/enforcement/complaints. If the facility is found to be out of compliance with the terms or conditions of its permit or of TCEQ regulations, it may be subject to enforcement action.

COMMENT 16

Group 2, Cullen Johnson, and **Elizabeth Williamson** have concerns about possible run-off into creeks and tanks where cattle drink from. **Jeffrey Overmier** and **Tony Ray Buzan** expressed concerns about how assurance is provided to downstream property owners that pollutants and pathogens are not being transported to their property and if the neighbors were visited to check on the danger from run-off and air pollution. **Allen Patschke, Morris Krueger, Gordon Druesdow,** and **Ginger Gross** are concerned about stream contamination. **Lawrence Brown** is concerned about contamination downstream to the coast.

RESPONSE 16

Runoff could arise from one source: rain events. Rain events cannot be controlled, but the low slopes at the site (between 0 to 5%) will greatly reduce any potential for the rain to carry sludge off the site. Areas of the site with slopes greater than 8% were buffered out of the application area. The ability of water to carry materials is directly related to its speed, and increases as a square of the velocity of the water. For storm water, the speed of runoff is directly related to the slope of the land. Therefore, the low slopes in this area will prevent rain from moving materials off the site at any appreciable rate. Coupled with the buffer zones, the low slopes greatly reduce any potential for contamination of surrounding areas.

TCEQ rules require that sludge and septage be applied to land in a manner that prevents them from entering water in the state. To ensure that this is achieved, the Applicant is required to maintain a buffer zone of 200 feet between the application area and existing surface water bodies. It is also required that sludge be applied at a rate equal to the nitrogen uptake rate of the plants being grown (the agronomic rate), thus ensuring that the nutrients are fully utilized by the plant and none are available for horizontal seepage into groundwater or lateral seepage into surface water bodies. The permittee must manage the site in a manner so that sludge does not run off the site. Where runoff from the application area is evident, the operator must cease further application until the condition is corrected. Application is prohibited during periods in which surface soils are water-saturated, frozen, or snow-covered.

Land application of treated sludge at the appropriate agronomic rates on soils with low permeability and recommended slopes while observing the buffer zones will not adversely affect surface water quality. As with any material used in agriculture, it is likely that small amounts of these materials will be carried off site during major rain events. However, the regulations on the materials and amounts used provide sufficient protection for the surrounding areas, and the large dilution factor from such rain events will prevent any significant contamination of adjacent areas. These materials are no more harmful than other materials commonly used in agriculture.

COMMENT 17

Jeffery Overmier is concerned if there will be erosion control devices required to protect downstream properties. **Sidney Ging** is concerned about erosion control.

RESPONSE 17

The land application site provides for a 200 foot buffer from biosolid application to the centerline of Spring Creek. The 200 feet will provide the vegetative area needed to filter nutrients. An area with greater than 8% slopes on the site was also identified and was added to the areas that will not receive sludge application.

COMMENT 18

Group 2 is concerned that there will be a transmission of viruses and diseases through flies and wildlife. **Sarah Chah** is concerned if there is a non-lethal control of vectors such as scavenger birds at the land application site.

RESPONSE 18

Sludge intended for beneficial land use is required to be treated to reduce its attraction for vectors (which limits the potential for transmitting diseases) by reducing odors. TCEQ rules outline specific requirements for vector attraction reduction. Additionally, if the site does attract vectors, this problem is considered to be a nuisance condition, which the permit and rules specifically prohibit. Should such a problem occur, the site operator must take an appropriate step to correct it immediately.

There is no requirement that vectors be eliminated from a beneficial use site. Such a requirement would not be reasonable because of the pervasive presence of flies and other vectors such as wildlife in agriculture operations and on land in general. The requirement is that the sewage sludge be treated in order to reduce the attraction of vectors to it. As shown in Appendix F of the application, this treatment is being done at each of the wastewater treatment plants that is producing sludge that may be used at this site.

COMMENT 19

Cullen Johnson and **Elizabeth Williamson** are concerned that it is still not proven that all pathogens have been destroyed in the treatment of the wastewater treatment plant sludge. Data was not shown, and **Jeffery Overmier** asks what the method and monitoring frequency will be of pathogen and vector attraction reduction. **Sidney Ging** and **Ginger Gross** are concerned about vector attraction.

RESPONSE 19

For sewage sludge to be classified as Class B with respect to pathogens, one of the pathogen reduction alternatives as stated in TCEQ rules must be used prior to land application of sewage sludge. For this particular land application site, the Applicant has chosen the pathogen reduction option to reduce the density of fecal coliform.

The method of this option is to take a minimum of seven samples of the sewage sludge that is collected within 48 hours of the time the sewage sludge is land applied each monitoring episode for the sewage sludge. The geometric mean of the density of fecal coliform for the samples collected shall be less than either 2,000,000 most probable number per gram of total solids (dry weight basis) or 2,000,000 colony forming units per gram (cfu/g) of total solids (dry weight basis). In the case of

this particular land application site, the geometric mean result from the City of Austin sewage sludge is 214,915 cfu/g.

One of the vector attraction reduction options in TCEQ rules must be used prior to or after land application of the sewage sludge. For this site, the Applicant has chosen a lab demonstration of volatile solids reduction anaerobically. The mass of volatile solids in the sewage sludge is reduced by a minimum of 38% as shown in a lab analysis from the City of Austin Hornsby Bend Wastewater Treatment Plant.

In regards to the drinking water treatment plant sludge source, the rules do not require submission of an option for pathogen or vector attraction reduction.

COMMENT 20

Joanne Buzan questions how completely sewage sludge will be rendered non-hazardous and non-threatening.

RESPONSE 20

The draft permit only allows the land application of sewage sludge and water treatment plant sludge as defined in TCEQ rules. Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in treatment works that includes, but is not limited to, domestic septage, scum, or solids removed in primary, secondary, or advanced wastewater treatment processes; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sludge generator or grit screenings generated during preliminary treatment of domestic sewage in a treatment works.

Water treatment plant sludge is sludge generated during the treatment of either surface water or groundwater for potable use. Neither sewage sludge nor water treatment plant sludge is defined in TCEQ rules as an industrial solid waste. In order to qualify for beneficial land appliction, sewage sludge and water treatment plant sludge must be treated to kill most of the pathogens present.

COMMENT 21

Earlene Youngblood questions if a water well inventory of shallow and deep water wells in the area and down gradient of the site has been performed.

RESPONSE 21

Yes. The Texas Water Development Board (TWDB) database of water wells and the Texas Commission for Environmental Quality records are searched for registered water wells on the

proposed permit property and within a one mile radius of every permit application reviewed by the Water Quality Assessment Team of the TCEQ.

The review of the TWDB database and the TCEQ records did not identify any recorded water wells located on the Stiles North Ranch. No down-gradient water wells were located in the TWDB or the TCEQ records within a mile from the site. The TCEQ files did have record of a water well report that located a well at the headquarters of the Stiles Ranch that is approximately100 feet west of Farm-to-Market Road 1063 and produces groundwater from 67 feet below ground level (bgl). The TWDB had records for the City of Thrall public supply wells which are located 1 mile west up gradient from the main ranch site and produces from 32 feet bgl.

A site visit was conducted that identified a hand-dug well, a brick liner, and a concrete lid just north from the lowest gate entrance on the southeast corner of the North Stiles proposed application area. The water level was observed at approximately 10 feet below ground level and appears to accumulate water from the Quaternary terrace deposits. Most farm houses in the area appear to have cement collars within 50 feet from the residence, visible from the road, which may indicate hand dug wells. The public meeting also supported that area residences rely on the shallow groundwater.

COMMENT 22

Tony Ray Buzan, **Mark Sobotik**, and **Sidney Ging** are concerned that there are wells and springs in close proximity to the site and that there are shallow wells less than 20 feet deep. They also have concerns that the wells around the area will be contaminated. **Sarah Chah** and **Ginger Gross** are concerned about the impact the land application site will have on existing shallow and deep wells.

RESPONSE 22

The public meeting revealed additional hand-dug wells outside of the application area that are intended for domestic use. The site visit also noted most farm houses in the area appear to have cement collars within 50 feet from the residence, visible from the road, which may indicate hand dug wells. No city sewer system was noted and the farm houses are believed to rely on septic systems. When a septic tank and subsurface drainpipe are placed in the shallow subsurface and in close contact with the same interval of shallow groundwater, the presumption is made that theses septic systems are not adversely impacting the neighboring shallow groundwater quality.

As a response to the concerns expressed at the public meeting, groundwater monitoring was recommended for both the North and South Stiles sites to identify the existing water quality and any water quality changes after beneficial biosolid application begins. The TWDB water quality records show shallow groundwater from the City of Thrall public supply wells have near-surface impacts to groundwater quality with nitrate concentrations ranging between 27 mg/l - 75 mg/l, which is above the EPA primary drinking water standard of 10 mg/l for nitrate. Groundwater quality from

hand dug wells near the City of Thrall sampled during the 1940's also show near-surface impacts to groundwater quality with nitrate concentrations greater than 50 mg/l.

Spring Branch was visited by the TCEQ in December of 2005 during a dry period. The branch contained water in the banks of the creek. Water was found seeping from a gravely terrace deposit that intersected the scour channel of Spring Branch just east of the shallow lined well.

TCEQ recommended that a monitoring well must be installed near the spring feeding Spring Branch. The shallow groundwater in the monitoring well will be sampled to show pre-sludge application groundwater quality entering the site from the west. Two additional monitor wells will be located at a point before the branch leaves the permitted property and down-gradient from a major portion of the area receiving sludge application. The first sampling event will occur before any sludge is applied to establish a background groundwater quality of the near-surface spring. A surface sampling of water from Spring Branch will be sampled before the branch leaves the property. Additional nutrients found in the surface water associated with the cattle operation and not attributed to sludge application will be identified. Continued groundwater monitoring of the spring area and the two down-gradient wells from the sludge application area and the branch leaving the property will indicate if the beneficial biosolid application contributes to further degradation of the groundwater quality beneath the application site.

COMMENT 23

Earlene Youngblood is concerned if there are oil or gas pipelines and other utilities present on site.

RESPONSE 23

A natural gas pipeline was identified from an onsite visit by the TCEQ in December 2005. The pipeline runs underground and is marked on the east and west fence line as a blue and white striped fence post. The underground pipeline is not expected to be compromised from the permitted sludge application activities.

COMMENT 24

Earlene Youngblood asks if the roads that lead to site flood and what is the impact on the existing drainage.

RESPONSE 24

A Federal Emergency Management Administration (FEMA) map was submitted with the application showing the sludge land application site and the surrounding area within one quarter

mile. All of the site area and surrounding areas are not prone to flooding. Also, a site assessment conducted by the TCEQ Region 11 Office on October 12, 2004, indicated that the site, including the roads that lead into the site are not located in a designated floodway.

COMMENT 25

Earlene Youngblood is concerned with the impact of the proposed site on the watershed in the area.

RESPONSE 25

The draft permit strictly prohibits discharges into water in the state. The draft permit also contains additional safeguards to minimize risks to nearby water sources. As long as the Applicant complies with the draft permit limitations, the watershed in the area is not expected to be affected. If discharges to ground or surface water occur, it will constitute a permit violation and are subject to TCEQ enforcement action.

COMMENT 26

Mike Cmerek, Tony Ray Buzan, and **Sarah Chah** want to know who will police the dumping of sewage waste and what is the TCEQ going to do to protect health and safety.

RESPONSE 26

The TCEQ will routinely monitor this site like any other permitted site. American Water Services Residuals Management, Inc., is responsible for submitting reports on a quarterly and annual basis to both the Central Office and Regional Office in Austin. The reports must include the following:

1. Amounts of sludge land applied
2. The site vegetation used and number of cuttings or grazings
3. The metal concentration, pathogen analysis data, and vector attraction certifications of sludge for each source.
4. A list containing the name and permit number of each source of sludge.
5. The date of delivery of each load of sludge land applied.
6. The date of land application of each load of sludge.
7. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC § 312.43 (b).
8. The suggested agronomic rate for the sludge.

The information listed aboveis provided in computer-generated report format for the quarterly reports and is made available for public viewing on the TCEQ website. Additionally, the TCEQ investigates all complaints received. Therefore, if improper activities are seen, they should be reported immediately to the TCEQ Region 11 Office in Austin for a timely inspection.

COMMENT 27

Cullen Johnson and **Elizabeth Williamson** are concerned with how will the people of Thrall and their neighbors know if a problem occurs and that Williamson County should be well advised to avoid future unknown problems associated with issuing land application permits. **Becky Cmerek** wants to know what number to call to report problems.

RESPONSE 27

The public may report possible violations of the draft permit by contacting the TCEQ Region 11 office or the toll-free environmental hotline listed at the beginning of this Response. Citizen complaints may also be filed on-line. If the facility is found to be out of compliance with the terms or conditions of its permit or of TCEQ regulations, it will be subject to enforcement action.

COMMENT 28

Sarah Chah is concerned about what happens when something goes wrong, and who is going to protect the people if someone gets sick or dies. **Earlene Youngblood** is concerned if there will be adequate water in case of a fire.

RESPONSE 28

It is the responsibility of the operator to plan for and take any emergency precautions necessary at the site and to operate the site in a manner to prevent public health nuisances. If issues do arise, adjacent landowners are recommended to contact the Region 11 office in Austin.

COMMENT 29

Earlene Youngblood is concerned with the effect the site will have and development have on the quality and quantity of the receiving streams and ponds, natural springs, and shallow ground water uses in the area. **Sidney Ging** is concerned about effects on area creeks.

RESPONSE 29

The permit issued for the North Stiles site does not allow any discharge of pollutants from the site. Best management practices and adherence to TCEQ rules will have minimum impact to water in the state. The streams crossing the application areas are buffered from, and exclude, sludge application within 200 feet from the centerline of the streams. One spring was located on the South Stiles site along the north bank of Spring Branch and is included in the 200-foot buffer from application.

COMMENT 30

Earlene Youngblood asks the direction of flow of the groundwater and what effects the proposed site will have on the flow of groundwater.

RESPONSE 30

The regional flow of the groundwater supplying the City of Thrall follows the dip of the gravel deposits, which is generally toward the southeast. Shallower groundwater and spring flow usually follow the surface contour. The application of biosolids does not alter or affect the flow of groundwater. The draft permit was written to have minimum impact to water in the state. The additional buffer areas that exclude sludge application from specific areas will be protective of water in the state. Groundwater monitoring on the North Stiles site will also identify the existing water quality and any changes to the water quality after beneficial biosolid application begins.

COMMENT 31

Earlene Youngblood is concerned if the down gradient geology has been investigated and if the applicant has identified the location of natural springs in the area and she has concerns on the effect the land application site will have on the natural springs in the area. **Mary Carroll** is concerned about natural springs in the area.

RESPONSE 31

The geology and springs located off site were not investigated, because they are on privately owned property and TCEQ does not have the jurisdiction to allow or require applicants to enter property owned by others to gather information. The North Stiles site will adhere to TCEQ rules that protect water in the state. The draft permit for the North Stiles site does not permit any discharge of pollutants from the site and does not allow the transport of biosolid nutrients from the site.

Because of the draft permit and rules, the down-gradient geology and the off site springs should not be adversely impacted from biosolid application on the North Stiles Ranch.

The geology that was investigated pertains to the application of biosolids. A site visit to the North Stiles site was conducted by the TCEQ and identified hand dug well with a brick liner and a concrete lid (old home site), observed north from the southernmost gate entrance on the southeast corner of the property. This well was buffered from sludge application by 150 feet.

COMMENT 32

Earlene Youngblood and **Allen Patschke** ask about the proximity of the site to recharge zones or to the surface or near surface of the aquifer. **Cullen Johnson** and **Elizabeth Williamson** are concerned that the water table is too close to the surface.

RESPONSE 32

Recharge to shallow groundwater occurs throughout the region. The recharge mechanism controlling the majority of hand dug domestic wells in the area is from regional capillary migration of water expelled from saturated soils. The expelled water then migrates to more permeable silt, sand, or gravel beds. The gravel beds are laterally discontinuous but, when extensive, may crop out at the surface and transmit surface water to the subsurface. The proposed land application areas were cultivated in the past and this has disturbed any silt, sand, or gravel beds that may have been exposed at the surface.

COMMENT 33

Group 2 and **Steve Clark** are concerned about the effects the land application site would have on drinking water. **Steve Clark** is concerned that hospital waste and low level radioactive waste can get into the drinking water and cause disease.

RESPONSE 33

The draft permit strictly prohibits any discharge of pollutants into water in the state that would contaminate drinking water. The draft permit also contains additional safeguards to minimize risks to nearby water sources. As long as the Applicant complies with the draft permit limitations, drinking water in the area will be protected.

Hospital waste and low level radioactive waste are not allowed to be disposed of into the municipal waste water treatment plants providing biosolids to the North Stiles Ranch.

COMMENT 34

Steve Clark and **Lawrence Brown** are concerned that the City of Austin uses different sewer pipes in the street for industrial sewage and others for household wastes.

RESPONSE 34

The City of Austin uses the same sewer pipes for both industrial and domestic wastewater discharges into their collection system. Any industrial wastewater that enters the sewer pipes that lead to the City of Austin wastewater treatment plant is required to comply with the City of Austin's pretreatment permit requirements. The City of Austin has a Texas Pollutant Discharge Elimination System pretreatment program, which is approved by the TCEQ, to regulate industrial wastewater discharges into their sewer collection system. As part of this approved pretreatment program, the City of Austin has developed local discharge limits to control wastewater discharges into the sewer system from industrial users. The City of Austin is also required to issue permits, inspect, and sample wastewater discharges from industrial users. In order to meet the permit requirements and local discharge limits, industrial users install wastewater treatment systems to pretreat their wastewater prior to discharge into the sewer system leading to the City of Austin's wastewater treatment plant.

COMMENT 35

Sarah Chah, **Lawrence Brown**, and **Gordon Druesdow** are concerned if the site operator is going to do air sampling and, if not, it needs to be in the permit.

RESPONSE 35

TCEQ rules and regulations do not require sludge beneficial land application sites to conduct air sampling.

COMMENT 36

Earlene Youngblood is concerned that people in the area were not allowed to comment on the impacted area. **Mark Sobotik**, **Hope Ging**, and **Jason Faulkner** are concerned that adjacent landowners were not identified in the application.

RESPONSE 36

TCEQ rules require that notice must be provided to all owners of properties adjacent to any portion of the total tract of land where the permitted activities will occur. In this case, the Applicant submitted a map indicating all the adjacent landowners. These landowners were included on the mailing list and were mailed notice of the application. In addition, notice is required to be published in a newspaper with the largest circulation in the county where the project is located. The first notice that was mailed and published was the Notice of Receipt and Intent to Obtain a Sludge Permit, which was prepared after completion of the administrative review of the application and declaration of administrative completeness. The second notice that was mailed and published was the Notice of Application and Preliminary Decision, which was prepared after the draft permit had been completed. Both of these notices were mailed to all people on the mailing list, which included all adjacent landowners identified by the applicant.

Anyone who, at the time the application was submitted, owned land bordering the perimeter of the tract of land on which the permitted activities will occur who did not receive mailed notice from the Commission should contact the Chief Clerk immediately. The Applicant may be required to resend and republish the notice if the notice procedures were not followed properly.

COMMENT 37

Jeffery Overmier questions how proper biosolid application techniques and methods are verified.

RESPONSE 37

The TCEQ has established management requirements, in accordance with its rules to protect against surface and groundwater contamination, and these are incorporated into the draft permit. The operator is required to apply treated sludge uniformly over the surface of the land and under conditions that prevent runoff of sludge beyond the active application area and protect the quality of the surface water and the soils in the unsaturated zone. The operator is prohibited from applying sludge during rainstorms or during periods in which surface soils are water-saturated. The draft permit requires the operator to cease further application if sludge runoff from the active application area is evident until the condition is corrected.

COMMENT 38

Joanne Buzan is concerned whether the Applicant will be paying fees to a general revenue fund and if any guarantees have been made concerning proper values or fees. **Mark Sobotik** and **Hope Ging** are concerned about the fees to be paid. **Becky Milholland** is concerned that the TCEQ is supported by fees from permit applications.

RESPONSE 38

Holders of TCEQ sludge permits are assessed an annual fee that is determined by the weight of solids beneficially used and reported to the TCEQ as of September 30 of each year. Failure to report does not exempt a permittee from this fee. Documentation of the weight used to calculate the annual fee can be checked against the required documentation every permittee must keep and maintain on each load of sludge delivered to a site.

The minimum fee assessed against each permit is $100, regardless whether the site is active or inactive. Otherwise, the fee is $0.75 per dry ton if the sludge is applied to agricultural land for beneficial use. If the sewage sludge is disposed of in any other manner, such as at authorized disposal sites where there is no beneficial agricultural use, then the fee is $1.25 per dry ton. The Commission has set these fees by rule with public input. The public policy preference inherently incorporated into the level of these fees is to beneficially use and recycle the nutrients in sludge rather than dispose of the sludge by any other means, in particular, to avoid disposing of sewage sludge into landfills, thus extending the workable lifetime of existing landfills for the disposal of other kinds of solid waste.

The annual fee for sludge permits is divided into two funds: one fund is dedicated to TCEQ operations (along with all or part of other fees assessed by the TCEQ) that pays for the cost of TCEQ's review of applications, enforcement of its rules, and general agency administrative operating costs; the second fund (along with part of the annual municipal solid waste fee) is dedicated by the Texas Legislature to the operation of the various councils of governments established throughout the state.

TCEQ assesses fees for all waste media in the state and for processing permits and other operations in an effort to cover the agency's operating costs without any supplemental appropriation from the state general fund. As with any organization, some years income exceeds expenses, other years expenses exceed income. Nevertheless, fees assessed by the TCEQ are public money, and the Legislature reviews and approves TCEQ's budget, including income and expenses, every legislative biennium.

In response to public comment, the Executive Director made the following changes to the draft permit:

The land application area was reduced from 317.37 acres to 285.41 acres due to the addition of necessary various buffer zones that were identified to staff during the public meeting and public comment period. The buffered areas were inspected during a site assessment by the TCEQ staff on December 6, 2005.

Respectfully submitted,

Texas Commission on Environmental Quality

Glenn Shankle
Executive Director

Robert Martinez, Director
Environmental Law Division

By _____
John E. Williams, Staff Attorney
Environmental Law Division
State Bar No. 24004991
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
512-239-0455
Representing the Executive Director of the Texas Commission on Environmental Quality

CERTIFICATE OF SERVICE

I certify that on October 2, 2006, the "Executive Director's Response to Public Comment" for Permit No. WQ0004746000 was filed with the Texas Commission on Environmental Quality's Office of the Chief Clerk.

John E. Williams, Staff Attorney
Environmental Law Division
State Bar No. 24004991

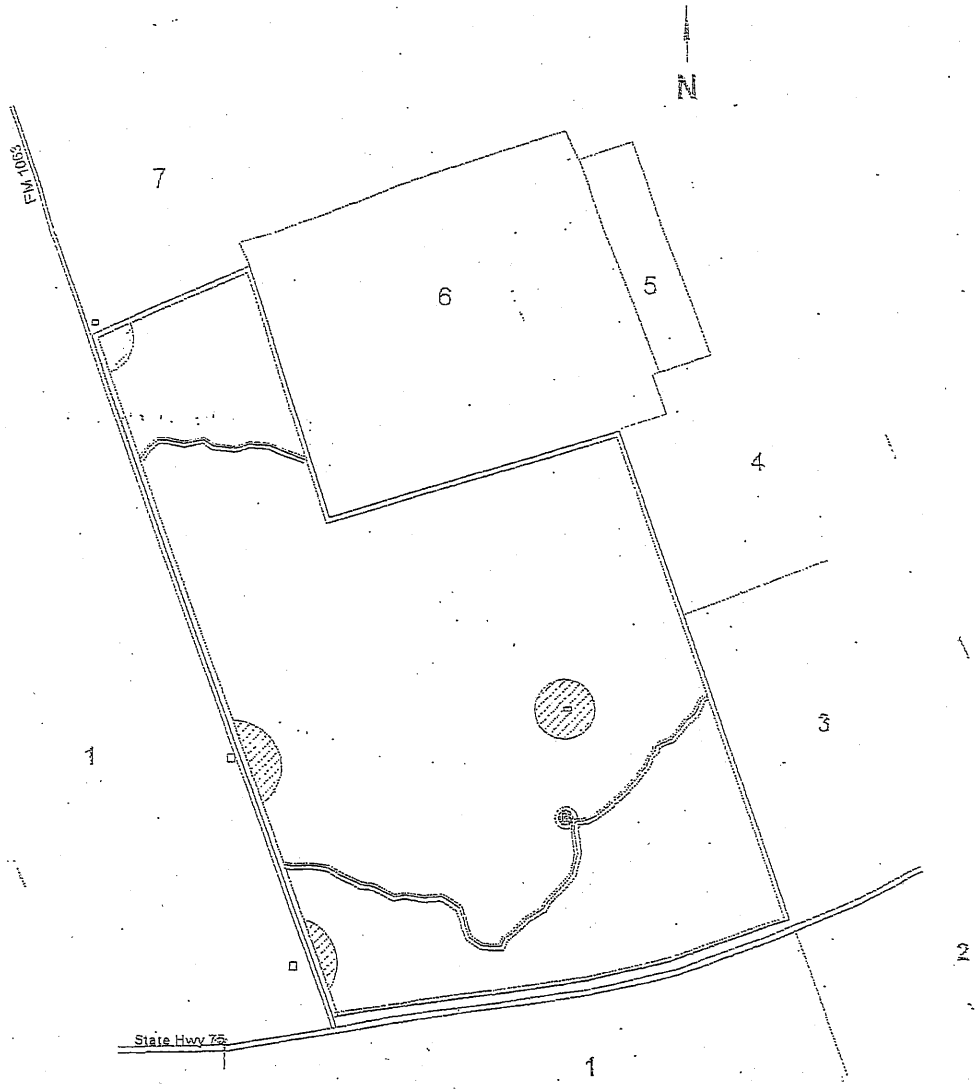
ATTACHMENT E

Applicant's Land Use Map and Landowners List
WQ4745000
WQ4746000

Stiles Ranch South Range
NEIGHBORING LANDOWNER MAP

409.52 Total Acres
~~381.57~~ Usable Acres

04745



04745

Neighboring Landowner List

1. Stiles Farm Foundation
   C/O Archie Abrameit
   P.O. Box 405
   Thrall, TX 76578-0158

2. Eldon & Mary Hengst
   908 Kirk St.
   Taylor, TX 76574-1557

3. Jean Sladeck
   101 Sunset Ln
   Temple, TX 76502

4. Frank and G.S. Stiles
   4180 Hwy 183
   Leander, TX 78641-1728

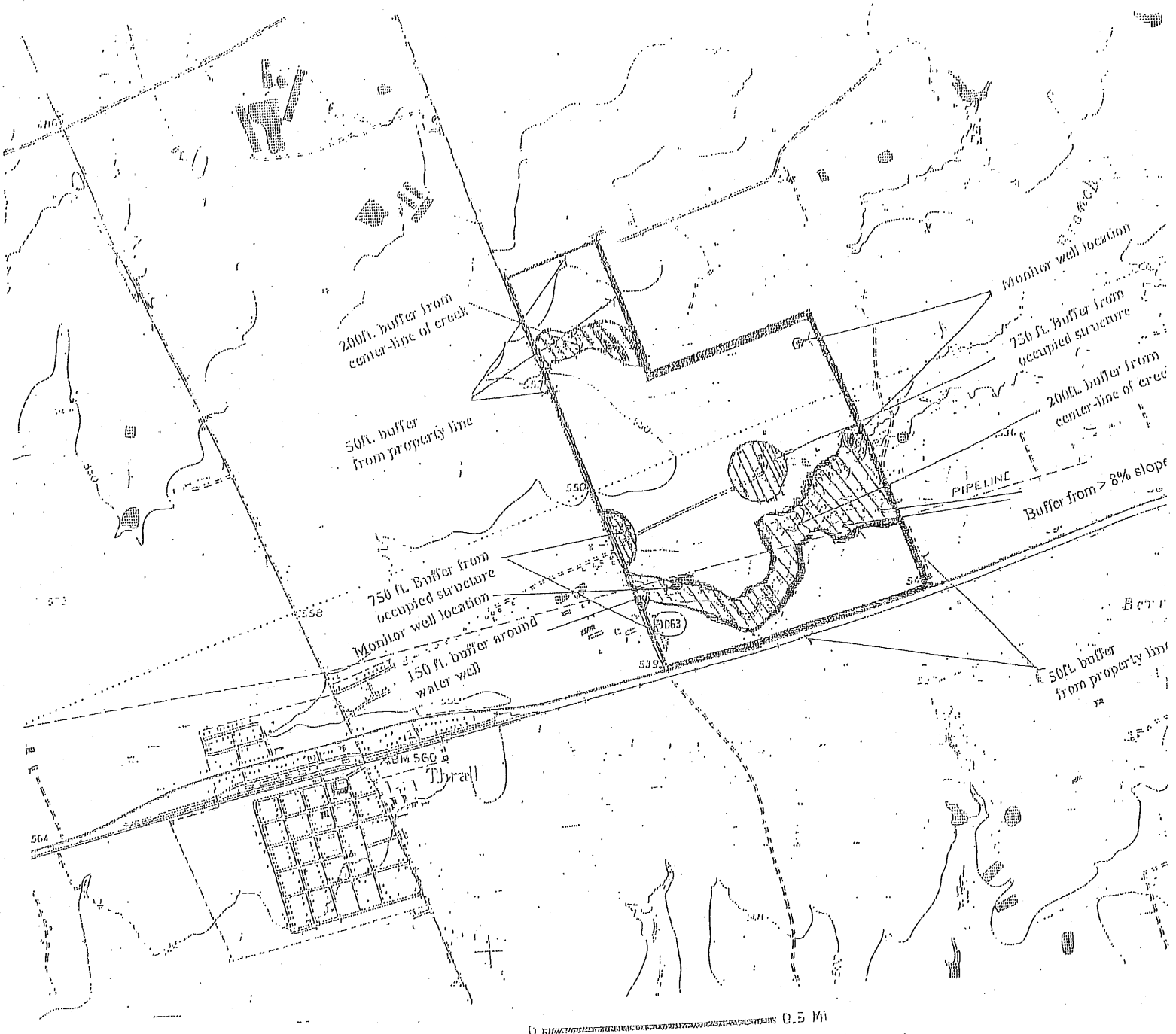
5. Sidney Ging
   80 CR 430
   Thrall, TX 76578-8516

6. Cullen Johnson & Elizbeth Williamson
   4020 Sable Oaks Dr.
   Round Rock, TX 78664

7. Marina Wilkins
   C/O Lester Stiles
   P.O. Box 445.
   Thrall, TX. 76578-0445

South Site

Attachment B



Application Area = 232.62 acres

Site Area = 409.52 acres

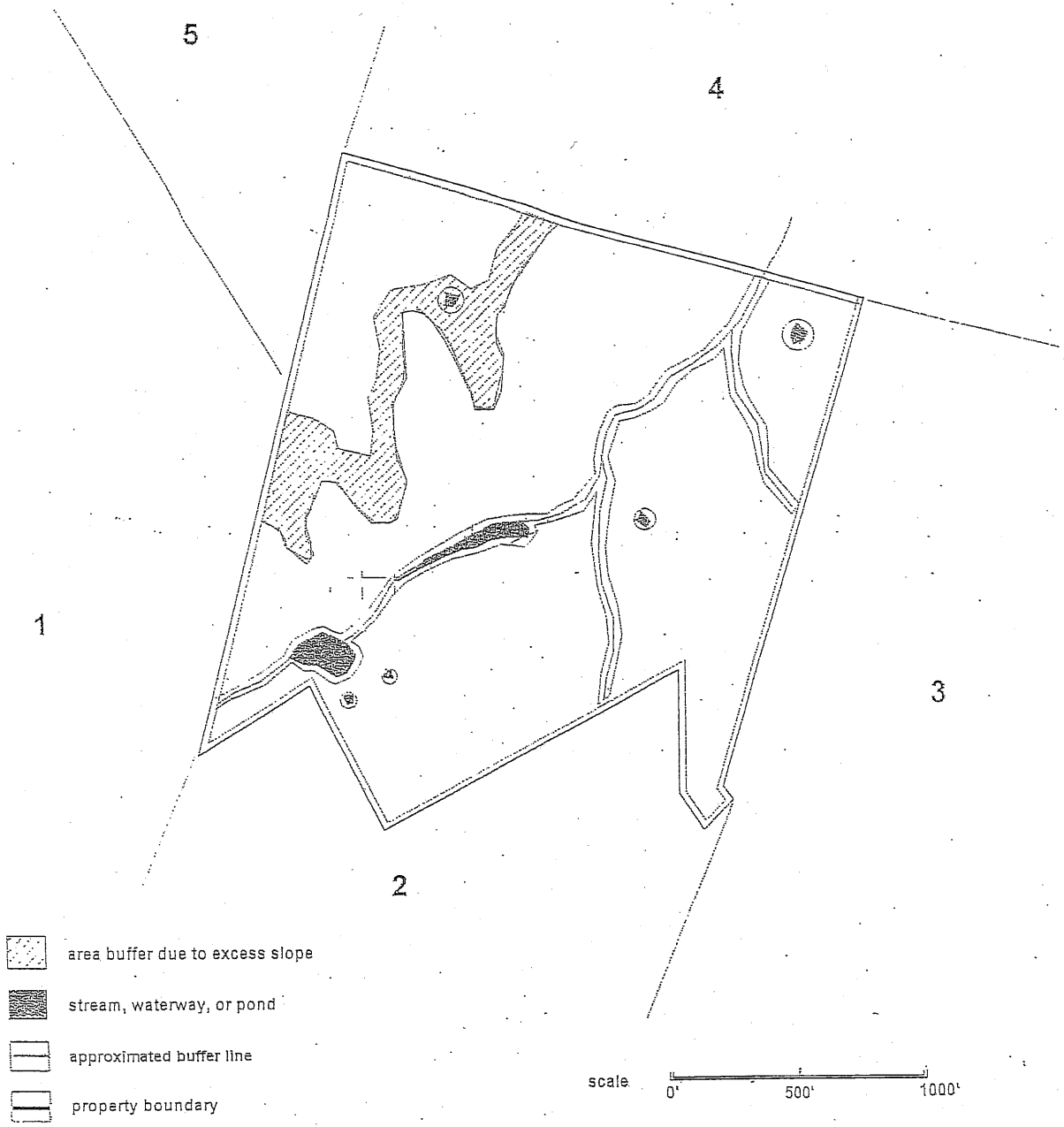
Stiles Ranch North Range

NEIGHBORING LANDOWNER MAP

361.93 Total Acres

285.41 ~~347.37~~ Usable Acres

04746



04746

Neighboring Landowner List

1. Erwin & Dorthey Teggeman
   1903 Grace St.
   Taylor, TX 76574-1416

2. Marina Wilkins
   C/O Lester Stiles
   P.O. Box 445
   Thrall, TX 76578-0445

3. Majorie Wallace
   307 Walkire Lake Dr.
   Sugarland, TX 77478

4. J.R.Barkley Trustee
   Leland Stevens Trus
   P.O. Box 1038
   Taylor, TX 76574-1038

5. Helen Kerlin
   901 Fisher St.
   Taylor, TX 76574

American Water Services Residuals Management, Inc.

TCEQ Permit No. WQ0004746000

Attachment B

Application Area = 285.41 acres

Site Area = 361.93 acres

ROAD CLASSIFICATION

Heavy-duty ... Light duty ...

Medium-duty ... Unimproved dirt ...

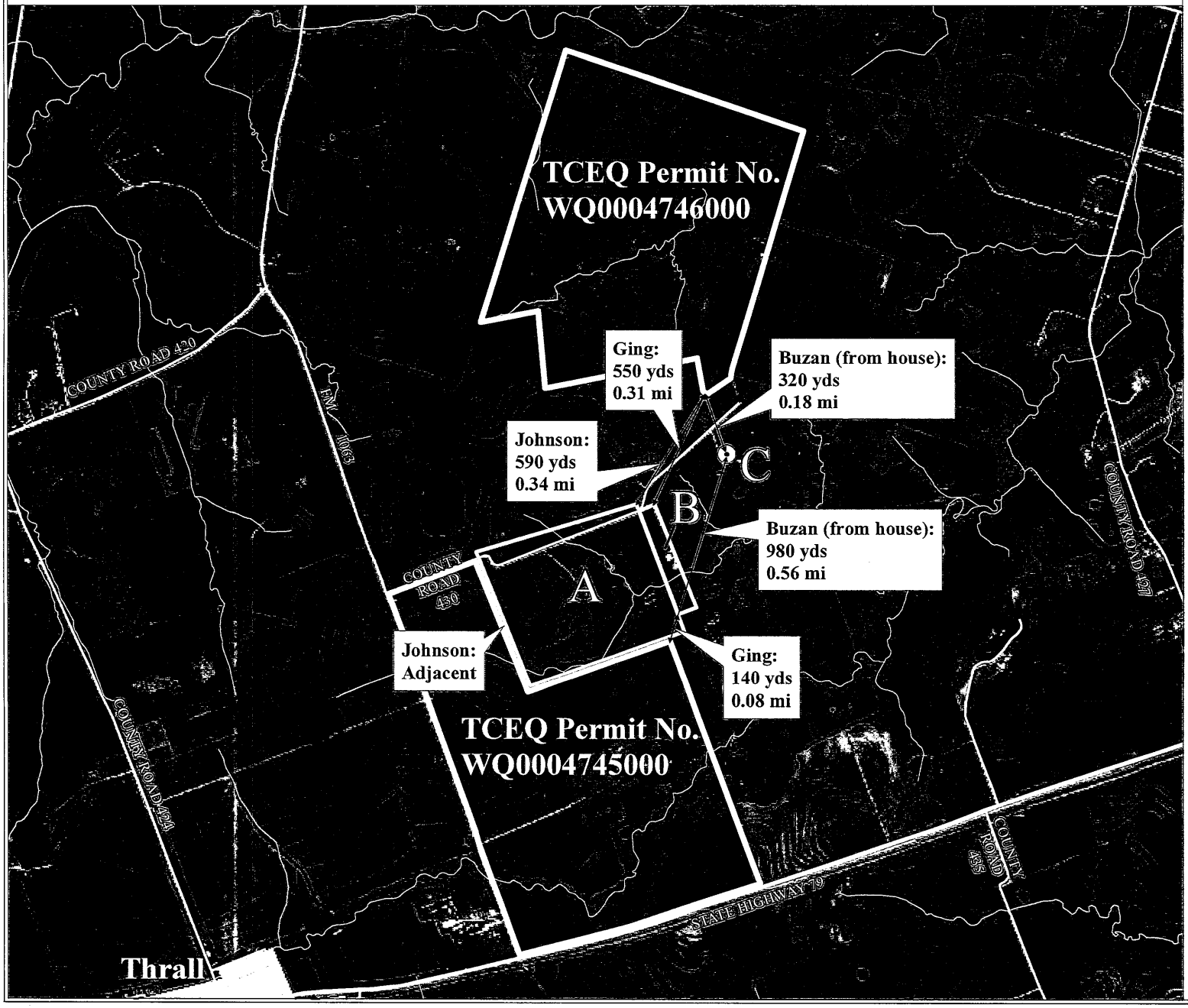
U.S. Route ... State Route

ATTACHMENT F

TCEQ GIS Map
WQ4745000
WQ4746000

American Water Services Residuals Management, Inc.

Neighboring Landowner Map / Permits WQ0004745000, WQ0004746000



Protecting Texas by Reducing and Preventing Pollution

TCEQ

Texas Commission on Environmental Quality
Information Resources Division
GIS Team (MC-197)
P.O. Box 13087
Austin, TX 78711-3087

March 14, 2007

Miles
0 0.125 0.25 0.5

Projection: Texas Centric Mapping System (TCMS), Albers Equal-Area, Meters

1 inch equals 0.4 miles

440 Yards = 1/4 Mile

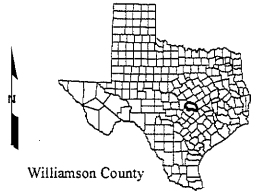
Legend

- Hearing Requestor Location (House)
- Proposed Facility Boundary
- Hearing Requestor Property Line
- River / Stream

Hearing Requestor Index

A	Cullen Johnson
B	Hope Ging
C	Tony Buzan

Sources: The DOQQ (Digital Orthophoto Quarter Quadrangle) aerial imagery was obtained from the USDA Farm Service Agency's National Agriculture Imagery Program (NAIP). The 2004 imagery is color infrared (CIR) at one-meter resolution. The hearing requestor's addresses and approximate property lines were provided by the TCEQ Office of Legal Services (OLS) and digitized or geocoded (Buzan only) by the TCEQ Information Resources Division using Geographic Data Technology (GDT) street data, 2006-2007.



This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This map was not generated by a licensed surveyor, and is intended for illustrative purposes only. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Information Resources Division at (512) 239-0800.

PE Buschow CRF 070309020